THE CULTIVATOR.

FORBES. VAN VRANKEN. N.Y.

THIRD — To Improve the Soil and the Mind. — SERIES.

VOL. I. — ALBANY, JANUARY, 1853. — No. I.

Third Series of the Cultivator.

With this number we commence the THIRD SERIES of THE CULTIVATOR. We commence a new series, because the supply of back numbers and complete sets is nearly exhausted, and to mark the fact of its reduced price. With this number, too, we enter upon a New Year, and with a hearty good will, wish all our subscribers happiness and success. Though separated from many of them by thousands of miles, we have a mutual ground of sympathy, mutual labors and hopes. We are striving for a common good—you in the bright sunshine and on the broad field; we in the confines of an office, and on a circumscribed sheet. We trust our readers will bear in mind that we are laboring for their interests, and that we intend to make THE CULTIVATOR the repository of the experience of the best skilled agriculturists of the day, as well as the advocate of principles of sound culture, as taught by the most scientific and reliable scholars of the country. While all the tendencies of the times are onward, and error plants, itself side by side with truth in the haste of rapid progress, we aim to be guarded and prudent; and while we shall welcome every advance in agricultural improvement, we shall also endeavor to distinguish between the false and true, and thus render THE CULTIVATOR a safe guide to the farmer. The matter of an agricultural journal must of course vary with the times, but the purpose and spirit of our work is always the same. Larger aims now enter the design of such a publication; for we have now to appeal to that knowledge and those tastes which at first it was our purpose to awaken.

A fruitful field and a cultivated mind lie at the basis of national prosperity and individual happiness, and whatever tends towards these, is within the scope of THE CULTIVATOR. We shall spare no pains or expense to make this journal worthy the continued confidence and patronage of those who have so long supported it, and to deserve all the eulogiums which the press and our friends have made, with regard to our efforts.

In thus commencing our THIRD SERIES at a merely nominal price, we ask for the continued aid and co-operation of all the friends of agricultural improvement. We must, of necessity, have a much increased subscription list, at the reduced price, or our expenses cannot be met. Will not each person into whose hands this number falls, use his best exertions to extend its circulation in his neighborhood, by getting up a club himself, or inducing some one else to do so?

We also invite attention to the COUNTRY GENTLEMAN, a specimen of which many of our subscribers have seen. We were led to its publication, from the conviction that a large class of farmers and others interested in rural life wished something more in an agricultural journal than it was possible to furnish in the columns of a monthly. Horticulture and matters of rural taste, demanded more attention than the limits of the Cultivator would allow. The home education of farmers and their families, the social aspects of country life, the pleasures that slumber too often at the fire-sides of country residents, all present themselves as most desirable topics for discussion in an agricultural paper. A growing literary taste demands articles of a higher order than usually find their way into such journals. In a weekly journal all these subjects may be combined with strictly agricultural matter, in such way as to fit it for general perusal, and the improvement of the family circle, while the paper will be none the less valuable to the farmer. This combination, together with a concise summary of news, will supply a want that is felt to a considerable extent by country gentlemen and their families. We have already received many flattering assurances that we have not mistaken public sentiment in this matter, and we commend the COUNTRY GENTLEMAN, to our readers as *the paper*, which no enlightened farmer, no man of rural taste, no one who wishes to educate his children to be farmers,

should be without. We will send specimen copies to all who apply for them, and shall be obliged for all efforts made to promote its circulation.

Monument to Mr. Downing.

It will be seen by the annexed notice, that the Committee appointed at the late meeting of the American Pomological Society, at Philadelphia, have organised, and are prepared to receive subscriptions for the purpose of carrying into effect the duties assigned them. No man was more worthy of such a testimonial, and we doubt not the sum necessary will soon be raised—for who, among all those who have read his works, and appreciatted their influence upon the rural improvement of our country, will withhold his aid to a project so creditable to the living and the dead.

The undersigned were appointed a Committee by the American Pomological Society, at its late meeting in Philadelphia, (with power to add to their number,) to solicit from individuals, subscriptions, each of *one dollar or upwards*, to procure such testimonial as the Committee may deem suitable and expedient, in memory of the lamented ANDREW JACKSON DOWNING.

His private virtues, his great worth and important services in Horticulture, Rural Architecture, and the various branches of terra-culture, and his numerous and valuable publications, justly entitle him to this distinction.

In discharge of the duty imposed upon us, we transmit to you this Circular, and earnestly request your prompt co-operation in fulfillment of this benevolent design.

Associations as well as individuals who may receive this Circular, are requested to transmit, by mail or otherwise, their contributions to either of the subscribers, who will register their names, residence and subscription.

MARSHALL P. WILDER, Boston.
ROBERT BUIST, } Philadelphia.
CALEB COPE, }
H. W. S. CLEVELAND, Burlington N. J.
BENJAMIN HODGE, Buffalo, N. Y.
F. R. ELLIOTT, Cleveland, Ohio.
LAW'NCE YOUNG, Springdale, near Louisville, Ky.
W. H. BRECKENRIDGE, Washington, D. C.
JOHN A. KENNICOTT, Northfield, Illinois.

The several Vice Presidents of the American Pomological Society, and the Chairmen of the various State Fruit Committees, are hereby constituted members of the above Committee, with authority to appoint associates in their respective States and Territories.

MARSHALL P. WILDER, Chairman.

Potatoes in Tan, Plaster, and in Ashes.

Some interesting experiments have been lately made with these different substances, which afford valuable results. The Journal of Agriculture furnishes a statement of trials made with potatoes covered with six inches of salt hay; with slacked lime in the hill and salt over it; with lime only, and that on the surface; with a shovel full of *tan* in the hill; with a shovel full of marsh mud; and with a shovel of cattle manure. The salt hay, slacked lime and salt, manure, and mud, were all attended with equal results; the lime on the surface and lime in the hill, afforded one-sixteenth more; while the tan under the seed yielded one-fifth more, and tan on the seed one-eighth more—the latter being larger, smoother, and better than the others. To what cause is the favorable influence of the tan to be ascribed? Some, doubtless, would refer it to its chemical composition; but the more probable cause is its mechanical influence, in regulating the quantity of moisture in the soil. Unfortunately, we are not informed whether the soil was light or heavy.

From a set of experiments detailed in the Genesee Farmer, on "a dark clay loam," in Scoharie Co., N. Y., it appears that in all cases the application of ashes, in the hill, or ashes mixed with a smaller portion of plaster, resulted in the rotting of a portion of the crop—much more so than when nothing was applied. On the other hand, the application of plaster alone resulted in the entire soundness of the crop. Further investigation may be needed to determine how much of this result was owing to chemical, how much to mechanical, and how much to other or accidental causes. We have often observed that where the soil contained adhesive portions, which stuck like mud to the toes, that such potatoes always rotted first. Could the ashes or plaster have controlled this particular influence? It is proper to remark that the ashes were followed with a much larger crop than their non-application.

Slaked Lime and Muck as a Manure.

A correspondent has made the inquiry, whether slaked lime, if mixed with the vegetable production found in our swamps, termed muck, would prove beneficial to the soil as a manure. Our answer is in the affirmative; and we would confidently recommend the process whenever it is practicable. The reason why this vegetable material, when mingled with the soil in its pure condition, is of so little utility, is altogether owing to the circumstance of its containing a considerable quantity of resinous matter in its composition, which consequently prevents it from undergoing so ready a decomposition as is necessarily required. But by the addition of slaked lime, or ashes, to the ingredients, the lime, or the potash and soda of the ashes, combining with the resin, embraced in such quantities in the muck, produces a soap which is soluble in water, and easily becomes washed from the woody fibres that it contains, leaving the undecaying materials to the free action of moisture, and those other agents which facilitate its decomposition; consequently, slaked lime united with muck, should be recommended; but it will not answer so well to mix with any other manures differing materially from it, and which may owe their fertilizing properties to nitrogen. In this latter case ammonia will be formed, and speedily pass off, to be dispersed in the atmosphere. J. E.

Albany, Dec. 1, 1852.

Farm Economy.

"I am not *rich enough* to be economical," said a young friend of ours, when we strongly recommended to him the profits of a certain improvement. "The want of means compels me to work constantly to a disadvantage, and I cannot enjoy the privileges and profits of my richer neighbors." This is a difficulty in which many intelligent farmers have found themselves placed, and from which they would most gladly be extricated. Innumerable instances are occurring in their daily practice, where they could secure golden results, had they only the lever of capital placed in their hands; but as they are now situated, they seem to themselves like the man who is digging the earth with his unassisted hands, or the one who is compelled to carry water in an egg-shell, while their more fortunate neighbors are turning up the deep soil with the most perfect instruments, or sending streams of refreshment and fertility through easy channels over their entire farms. Now, we are not about to plan a "royal road" of escape from this difficulty; it must be met and conquered. If the attack is rightly made, the conquest will be comparatively easy; if wrongly, it will be the discouraging and formidable task of a life time.

The eager inquiry is now made, What is the easiest mode of conquest? We answer, the first and great leading means, is a large fund of thorough and practical *knowledge*. The man who, by a close observation of results in his own practice and in the experience of others, in connection with the immense amount of useful *suggestions*, (to say nothing of distinct practical directions) contained in the best publications of the day, possesses, even with a very short purse, a vast advantage over the short-sighted, ignorant, and unobservant capitalist. He will turn to advantage, even with his very limited means, a thousand resources which others would allow to sleep unemployed forever.

We once had occasion to observe the contrast in the condition of two young farmers, one of whom had a four-hundred acre farm "left" to him; the other had but fifty acres, which he had paid for in part, by previously laboring on a farm for some years by the month in summer, and teaching a district school in winter. The one had the capital of money which his own hands had never earned; the other possessed the more valuable capital of knowledge and indomitable perseverance. The young heir was more interested in riding about, in parties, balls, and in jaunts to the city, than in the details of farming, and knew the contents of the tri-weekly political newspaper, and of a certain frivolous magazine, much better than of any agricultural journal, or of Norton's Elements. His farm became an exact reflection of its owner's character. Fences were soon obscured by belts of alders, blackberries, and burdocks; and buildings showed marks of premature age, and became dilapidated. There was a thirty-acre marsh, which might have been drained, but it never was. And there was a patch of Canada thistles which filled one twelve-acre field, and part of another, which he could have destroyed in one season, had he known how others had done. One hundred and eighty loads of manure, as estimated at one time by a neighbor, were allowed to lie a whole year about his barn, without application. His cattle were of the long-horned, big-headed, sharp-backed breed. His swine were the Long-bristled Racers. His profits in farming may be easily guessed. There was a general complaint among his neighbors, that his debts were never met within six months after the appointed pay-day, and that he endured a sharp dun with extraordinary patience. It is true, necessity drove him to retrench his expenses, and the improved examples about him induced him to amend his practice, but not until his farm was reduced to less than half its original size, by portions sold off at three different times to satisfy mortgages.

Well, what become of the young fifty acre farmer, we are asked. He has ceased to be a "fifty-acre farmer." He began by examining closely what improvements could be made, of whatever character and kind, whether cheap or expensive. Among these he was compelled to select first the cheap improvements, or those which promised the largest profits for the smallest outlay. One of the first of these was the draining of a three-acre alder swamp, a large portion of which he did with his own hands in autumn. between seeding and husking. He had read of Judge BUEL's success with *brush drains;* he constructed all the side or secondary channels by filling them at the bottom with the bushes cut from the ground, which enabled him to accomplish the work at less than half the usual price. These brush drains have now stood many years, and the brush being wholly excluded from the external air, has not decayed, and they carry off the little water required, being numerous, and at regular intervals. Now, observe the result: The alder swamp would not have sold originally for five dollars an acre; it now brings crops of corn, broom-corn and meadow grass, more than paying the interest on a hundred and fifty dollars per acre, besides all expenses. He doubled his manure by drawing from the most peaty portion of this drained swamp, large quantities of muck to his farm-yard, where it was kept comparatively dry till wanted, under a cheap slab

and straw shed. By paying a small sum yearly, he was enabled to improve immensely the breed of his cattle, sheep, and swine, and which he thinks has returned the money thus expended at least twenty fold. The same keen attention to his business in other points, enabled him to effect many additional improvements, among which we may briefly mention a cheap and simple horse-power of his own construction, consisting of a rope running on the ends of radiating arms, which enabled him by means of one or two horses, as necessity required, to thrash his grain, saw his wood, drive his churn, turn his grind-stone, and slit picket-lath. It is true, he has now thrown this rude machine aside for the greatly improved endless-chain power, but it answered his purpose for the time, before the days of improved machinery. But among all his outlays for the sake of economy, there is none which he thinks has repaid him equal to the subscription money applied in taking two agricultural periodicals, costing him a dollar and a half yearly besides postage, and which, in connection with his own experience and good judgment, have been the chief guides in most of his great improvements. He has been enabled to add sixty more acres to his land, and the whole presents a beautiful specimen of neat, finished, and profitable farming.

None of this is fiction. It was gradually accomplished by years of constant, steady, intelligent perseverance.

A great loss occurs to the majority of farmers from too meagre an expenditure for implements—the effective medium for the action of all the labor. The eagerness to secure big farms, at the cost of their profitable culture, is a most fruitful source of bad husbandry. We observe by the last census, that the cash value of farms in the Union is over three thousand million dollars, and the value of farm implements only a hundred and fifty millions; that is, each farm worth three thousand dollars, has, on an average, only a hundred and fifty dollars worth of plows, cultivators, rollers, carts, wagons, harrows, fanning mills, straw cutters, root slicers, harness, shovels, spades, forks, hoes, horse and hand rakes, scythes, cradles, axes, hammers, sleds, wood saws, hay knives, ox yokes, chains, &c., &c., to say nothing of reapers, grain-drills and threshing machines, which may possibly be borrowed or hired. Instead of only $150, all these cannot be had, of good construction and quality, for much less than $500, leaving a deficiency of about $350 to be made up by slip-shod cultivation and by borrowing. In England, where taxes, poor-rates, rents and tithes, constitute together an enormous drawback on the profits of farming, and where, consequently, every operation must be performed to the best possible advantage, no one need hope for success who does not possess an amount of capital equal to forty dollars per acre, for procuring animals, implements, seeds, manure, and labor. "No prudent man," says the Mark Lane Express, "*ought* to rent more than he has that amount, at least, of available capital to go on with."

If, therefore, our farmers generally laid down at the commencement of their labors, the great fundamental principle that capital as well as farms is indispensable to success—that they might as well undertake to run a car on a single rail, as to farm with land only, or capital only—that they must especially lay in a heavy amount of that most efficient of all kinds of capital, *thorough knowledge*—they need no longer complain that they have a machine they cannot profitably manage—a locomotive without fuel, or without a competent engineer to take charge of its levers.

The Culture of the Hop.

Mr. TUCKER—In answer to your call in the Oct. Cultivator, for "any one of your readers to give you, from his own experience, an article on the culture of the hop," I accept the invitation, and proceed to give, in as concise a way as I can, the general method of cultivating hops.

From considerable observation, added to seven years experience in the growing of this important crop, I may state in the first place, as one of the most important things necessary to the successful cultivation of this vine, is the selection of a suitable piece of ground. A very general remark in this hop-growing region is, that almost any land that will produce good corn, will also, with good care and high cultivation, produce good hops; and although this may be true to a certain extent, yet it is evident that soils composed of certain elements, of which others are destitute, are those best adapted to the growing of hops. The opinion of the writer is, that soils of gravelly loam, with retentive sub-soils, are the best found in this section.

The ground selected for hops should be level, or nearly so, as the high cultivation required will keep the land so mellow that it will be liable to wash and gulley, and thereby injure its fertility, if it is not nearly level. By all means avoid planting hops on steep side-hills.

The ground selected, the next thing requisite will be to put it in a proper state of cultivation to receive and nourish the roots. The most effectual way of doing this, is to till the ground thoroughly the previous year, with some hoed crop, (corn or potatoes, for instance.) A heavy coat of manure should be applied broad-cast, and well worked

into the soil with the plow. It should also be plowed deep, and sub-soiled, to loosen the earth below the ordinary depth of surface plowing, (which is generally too shallow for any crop) as the roots of the hop, like most other plants, will spread and flourish best in deep, mellow soils. The fact of their roots running deep, will not be disputed by any one who has ever cultivated them, or attempted to plow up an old yard, as, in doing the latter, I have frequently found them to set a good team, their roots running straight down to the depth of three or four feet.

After the ground is made rich and mellow, and harrowed level and smooth, the best, as I think, and easiest way to mark the rows, is with a horse and light plow. There are two methods in use here of setting the hills. I have fields set both ways, and hardly know which I prefer. The first and old-fashioned way, is to draw our furrows as straight as possible—from east to west, seven feet apart—from north to south eight feet, and plant the roots where the furrows cross, so that the hill will be about level with the surrounding earth. This gives 770 odd hills to the acre. When set in this way, two poles are used to the hill, and two vines to each pole.

The other way, and it is preferred by some, is to mark the rows five feet apart each way, and set one pole to each hill. This will give a trifle over 1,700 hills to an acre. It is readily seen that the last method gives more than double the number of hills to the acre, and requires also more poles.

I believe that more hops may be grown on the same ground set by the last method than by the other; but there are some objections to it which must not be overlooked. It is our invariable practice in Otsego, to manure our hops well in the fall, before the ground freezes, by putting several shovels-full of good manure on each hill. This enriches at the same time that it helps to prevent them from freezing and dying out in winter. Now, every hill of hops requires about a certain quantity of manure to enrich and protect it properly, and if we have 1,700 instead of 770 hills to manure, we shall require more than double the manure to every acre, and more poles, both of which are scarce and dear.

The roots for planting, are obtained from old hills. They are called runners, branching from the main or bed root, in all directions, and running near the surface of the ground, somtimes several feet in length. They are easily obtained by digging with a hook, similar to a potato hook. These runners are full of joints and eyes, and should be cut in pieces, each piece to contain two sets of eyes. Three pieces, if the roots are good, (and if not they should not be used) are sufficient to plant a hill. Some prefer setting the roots in the ground endwise, but from experience in both ways, I prefer planting them horizontally, and placing the pieces in the form of a triangle. They may be planted either in fall or spring, but if done in spring, as is the common practice, it should be done as early as the state of the ground will admit, which will be several days before it is time to plant corn.

We generally plant our hop-yards the first year with corn, not expecting any returns that year from the hops, as they require one season to get vigorously and firmly rooted, and in this way we obtain just three-fourths of a crop of corn, letting the hops occupy the rest of the ground, and hoeing them as often as we do the corn.

Nothing pays so poorly for half-way cultivation, as hops, and the farmer who would realize profits by them, need have no fears of cultivating them too highly.

After the yard is ready to pole, the first thing to be done in spring, is to remove the manure from the tops of the hills, and as soon after as the frost will permit, the poles should be set. Where the hills are only five feet apart, the poles should be set perpendicular—where they are 7 by 8 feet apart, they are set two to a hill about one foot apart on the hill, as they run from north to south. They should also incline a little from the hill so as to divide the space at the tops, and this will prevent the branches from becoming entangled with each other.

Yards do not generally need grubbing the first year they are polled; but after that they need grubbing annually. The runners before spoken of, are then taken off near the hill, as they will otherwise take the sap that should go to the vine. Immediately after grubbing, a man with his team and load of manure should follow, and into the trench formed by grubbing, should place a little fresh and strong manure. A boy must follow with his hoe, and cover up the manure just laid down. This is called priming, and is the last manuring they get for the season. The act of grubbing, it will bo observed, not only clears the hill of unnecessary roots, but cleanses it, and leaves it all fresh. It will remain so till the vines begin to need tying, and this should be begun as soon as any are long enough to reach the pole, and be continued from time to time as they may need, until they reach the top of the poles.

In the mean time, a good deal of trimming is necessary, as no pole should have more than two good vines to run on it; all extra vines must be cut off, and any other little intruder that makes its appearance on the hills must be plucked up.

In addition to this, the ground must be plowed, cultivated, and hoed several times during the summer—at least sufficient to keep the land mellow and free from weeds, for nothing is so unsightly as a hop-yard all grown up to weeds. Care should be taken not to haul dirt to the hills, but to keep it away, and leave the vine nearly or quite bare, where it unites with the root, during the early part of the season, as the grub which eats off the vine just at the surface of the ground, will be doing his work then. The grub generally does his work and disappears in the early part of July, and then the yard should be hilled, which is about the last thing to be done before picking.

I have now given you the details of raising hops up to the time of picking, as practiced by myself and many others; if this should in some degree serve your purpose, and you think it would be of service to your readers, I will in some future number, send you another article on picking, drying, preparing them for market, cost of cultivation, &c. AN OTSEGO HOP-GROWER.

We are greatly obliged to our correspondent for the preceding, and shall be glad to receive the article he promises in relation to finishing the crop.

The Cultivation of Wheat on the Prairies.

MR. TUCKER—The more I have investigated the prevailing systems of cultivation and management given to prairie land for the wheat crop, the more convinced have I become, that the Upper Mississippi valley is destined before the lapse of many years, to become one of the most successful wheat growing portions of the world. The prevailing notions of farm practice will, however, have to undergo vast changes, before any material improvement need be expected. I hold that every intelligent mind, who has given up his life and study to carrying out the practical details of agriculture, can do something towards ameliorating and elevating the present condition of American agriculture; and hence I am disposed, in common with many hundred other co-laborers, to snatch every idle moment that presents itself, for the purpose of presenting some useful suggestions before my fellow farmers, that may prove profitable and acceptable, and afford them some "*material aid*" in removing the numerous mysteries that seemingly enshroud the ancient and noble profession of agriculture. In this, as in all other reforms, innovations are subject to severe criticism; but no great physical change can be effected in any department of science or arts, without the use of means that will surely and forcibly remove existing barriers, and build up in their stead, a sound and philosophical structure. Now, in regard to the practical business of wheat growing in Illinois, Missouri, Iowa, and Wisconsin, I have become satisfied that the existing difficulties that prevent the successful culture of wheat, may be surmounted, and in process of time, what is now considered a doubtful business, may be converted into a safe and profitable operation.

Among the many things to be done in this matter, is the making of naked fallows. This is advisable on many accounts, and where much or little wheat is sown, a naked fallow, consisting of at least one-third the area to be sown, should be made. Deep plowing, by which a liberal share of the clayey particles in the subsoil is brought to the surface, is important in the second or midsummer plowing; and instead of sowing the seed on a flat surface, the ground should be plowed into narrow ridges, and if possible the seed sown in drills, at the rate of from seven to eight pecks per acre. Clover culture is more required on the prairies, than even on the New-York oak openings, but the effects required to be produced on the former, are materially different from what is necessary for the latter. The soil on the prairies requires to be acted upon mechanically by frost, sun, and air, and the percolating influence of clover, or any other tap-rooted plant, will produce the required change effectually, and at a very trifling cost. A clover sod, to be in the best possible condition for wheat, in a prairie country, should be broken up the second year in July, and the last of August plowed the second time, for seed, and the ground then will be cloddy, and in the very best condition for seeding, securing the speedy germination of the seed, and a strong and healthy growth of plants, both of which are of the greatest consequence.

If the plowman be expert, and can turn a well proportioned furrow, and make his work uniform, one plowing for a clover sod is sufficient—but it should be done one month before sowing, to impart to the surface a suitable mellow condition for the seed, and also that portions of the sod may break up and remain on the surface, by the action of the seed harrows, thus securing the same object sought by the second plowing. Sowing wheat among standing corn is an excellent practice when done by competent workmen. The most successful plan will be found by planting the corn in rows five or six feet apart, and the hills in the rows two feet apart. The plowings, horse hoeings and dressing with the steel tooth cultivator, will all require to be done in one direction across the field, and not in right angular rows, as is the common practice; and before the wheat is sown, the ground should be made level with a steel tooth cultivator or harrow. The time for seeding should be the

last of August; the quantity sown per acre two bushels—and the seed should be plowed in, putting the whole field into lands the width of the rows of corn. The stalks may remain on the ground during winter, and about the first of March be chopped down, and allowed to remain on the surface. W. G. E.

Professional Education of Farmers.

L. Tucker, Esq.—I congratulate you, my dear sir, on the advent of your "Country Gentleman," and for one, desire to extend to him the right-hand of social fellowship. Coming, as he does, with a letter of credit from you, it is presumable that he is, indeed, a real gentleman—a man of education, of good social and moral habits, and a man of business. Although the popular idea conveyed by the term "gentleman," is that of an idle man, a man of leisure, a man that is not obliged to attend to any kind of business for a living, I do not so understand the term, but rather as I have defined it above. But the "*country* gentleman" is, or ought to be, the perfection, the highest grade of the human family in private life; and, as a general rule, he generally is so. I have mixed much with all classes of society in this country, and can say frankly that I have met with more genuine gentlemen in the country, on farms and plantations, than in cities and towns. I have found but one fault in all my intercourse with country people, that is calculated to degrade them, and that is almost universally prevalent; and so long as it does prevail it must continue to degrade the profession. It is the absence of a proper *esprit du corps*, and in its place, a longing desire for other professions. They "look *down*" upon their own profession, and *up* to every other. They educate their sons for lawyers, doctors, divines, merchants; and those who cannot be thus educated, educate *themselves* for farmers, *as it happens*. Is not this the truth?

Now this must be reformed entirely. Farmers must be ambitious of becoming great farmers instead of great lawyers and doctors; and farmer's sons and daughters must be enabled to see in their father's profession, a station and standing sufficiently exalted to satisfy their highest ambition. But how can this be accomplished? By a proper system of education. At present the great end and aim of of education is what is called professional—that is, the student is being educated for a lawyer, &c. Take the catalogues of Yale, of Harvard, or of any of our colleges, and where you will find one student preparing for an agricultural life, you will find five hundred preparing for other professions. If a farmer has two sons, and the one exhibits a modicum of intellectual "smartness," and the other the same amount of dullness, the former is forthwith sent to the law school, the latter to the barn-yard.

Among all that has been written on the subject of education of farmer's sons, I have not seen what I consider the proper idea inculcated. It is true, we are continually furnished with essays recommending the establishment of agricultural schools, colleges, farm schools, &c., but they do not contain the germ from which the future tree must grow. Legislatures must not be looked to, to establish schools. Farmers must establish them themselves. Lawyers and doctors and divines, establish their own schools, and why not farmers? These professions would fare poorly, just as the farmers do, if they were to depend upon the legislatures to establish medical colleges, &c., for them. No, they first put their shoulders to the wheel, and then call upon Hercules. But the great idea, so universally overlooked, is, that the farmers must first appreciate the respectability, the gentility, of their own profession, before they can be induced to take the proper measures to ensure a thorough professional education for their sons. They must cultivate a spirit of respect for themselves and their profession; and consider no other class of men, no other profession superior or more respectable than their own. They should do as other professions do, associate and consult together upon their own professional affairs; establish schools and colleges for the education of the young; and, in fact, do as all other professions do to advance their own interest.

Let us sketch a plan of education, and as a model we will take the medical profession. What does a man do who has a son that he wishes to become a doctor? He selects some good physician, and puts his son with him to study, two or three years. This is to give him a theoretical knowledge of the rudiments. The physician will instruct him as to the books he must read, make him acquainted with the minor practical duties of the profession, and give him opportunities for such practice as may be considered proper. This is an apprenticeship. After a proper length of study in the office, he is sent to the medical college, where he completes his theoretical studies, and has the advantage of the clinical practice in the infirmary or hospital, and at a proper time, after sufficient study, he receives his diploma.

Now, farmers should do the same with those of their sons they intend for farmers. They should instruct them in the principles as well as the prac of their art; they should put books into their hands to be studied; they should, in fact, be carried through a regular apprenticeship. When they

have gone through with this preliminary study of theoretical and practical farming, such as can be given them at home, or with some respectable farmer, they are prepared for the higher school studies. Every county should have at least one high Agricultural School, established and supported by the farmers, both in the science or theory, and practice of agriculture. Until the farmers adopt a system of this sort, it is impossible that they can ever attain to that high professional standing that is enjoyed by other professions.

What, let us ask, is the system at present in vogue? The boy grows up on the farm, and sees as little of the farm-work as he possibly can. No one explains to him the why and because of any operation. If his parents are able, he is sent to some neighboring school, where he learns to read and write, and possibly to "cypher" some; but he learns to envy the condition of the schoolmaster, the clerk in the store, the doctor's students, and the lawyer's young men, and to hate the idea of returning to the work of a plain farmer. Here is the root of the evil, and I do not see how it is to be eradicated, except by a radical change in the school system, and in the minds of the farmers themselves, as to the standing and character of a farmer's profession. If the young be induced to consider the profession of a farmer as dignified and "*genteel*" as that of any other class, they would not so readily imbibe a dislike for it. This can be accomplished by a proper systematic course of instruction at home, and by schools properly instituted and managed.

As a general rule, every class of people enjoy precisely the character and standing in society that they themselves select. If the members of any profession, as a body, select a high grade of standing, and use the means for attaining it, they must and will occupy it. But if they merely look upon this high grade with an envious eye, and take no measures for securing it to themselves, they will most assuredly never attain to it. There is a very prevalent idea among practical working people, that *other* people look upon them as a degraded class. In all my experience, I have found this idea to have originated with themselves, and that the other classes, without their suggestion, would never have thought of such a thing. Self-respect should induce every man to put a proper estimate upon his own claims to the respect of others, and preclude the idea that any one else *can*, much less *does*, underrate them. G. B. SMITH. *Baltimore.*

We hope our readers will "read, mark, and inwardly digest," the above remarks. The suggestions are important, and worthy the consideration of all who desire the elevation of agriculture to the rank of a "profession." EDS.

Protecting River Banks.

MR. EDITOR—As my premises border on the creek, the Onondaga, I have been troubled somewhat by the action of high water, and especially where the force of the stream is turned upon the banks by sharp curves and angles. Not unfrequently when the frost is in the ground, a freshet will transfer some rods of "real estate" to one's neighbor, who owns the land on the opposite side of the stream. To prevent this involuntary transfer, those holding the fee simple below me, have resorted to planking the exposed banks, though with but partial success, and with very considerable expense. I adopted a mode last season, which so far proves entirely successful—one that is attended with but trifling expense in any respect, and one that may prove advantageous to your readers similarly situated.

The work to be well done, should be performed when the water is low. Commencing at the water's edge, drive a row of stakes, of almost any material, about four feet apart, pointing up stream at an angle of some 45 degrees. At two or three feet from these drive another row in the same manner, the stakes alternating with those in the first row, followed by a third and fourth, where the banks require. Between these stakes, *brush* is laid in evenly and well tread down, receding from the water to the top of the bank. The brush should be laid in evenly and compactly, as well to break the force of the water, as to hold the mud, leaves, &c., and thus to form a solid bank. By pointing the stakes up stream, the force of the water forces the brush under them instead of its being lifted and floated off by the current.

Over that portion of bank thus secured last year, I put on some coarse gravel which I had, and had no better place to put. There had been two freshets, however, before the gravel was applied, and the brush barrier remained firm through their action. This season the brush is nearly out of sight, imbeded in sand and mud. The experiment is deemed entirely successful.

In connection with this subject, I remember the inquiry of A Subscriber, some time ago, how to protect his banks from the bad effects of musk-rats, or how to destroy them; and the directions given were to catch them in steel traps! Pardon me, but I think the inquiry and the answer equally simple. Anybody who knows anything of the habits of this animal, knows that in rivers, &c., they burrow under high and steep banks, digging their holes from low water mark to near the surface of the bank, and often with an outlet on the land side. These holes form ready channels for the water in freshets, and are often the cause of much

damage. As a better remedy for this evil than steel traps—which is effectual enough, provided you *get their foot in*, to destroy or drive them away—I would recommend breaking down the banks, sloping them back at an angle of 45 degrees. After such an operation, I will guarantee that the muskrat will *vamose*. This, too, I think, by well seeding the bank in the early part of the season, so as to give time for the grass to become well rooted before the season of frosts and freshets, will secure them from washing, with a little attention to points where they become undermined below low water mark, with the *brush* barrier, as above recommended. Yours, &c. T. A. S. *Syracuse, Nov.* 30, 1852.

Good Management of Cattle.

S. P. Chapman, of Madison Co., is well known to every reading farmer in the country, for the whole columns of prizes which his fine cattle have swept from the premium lists of the New-York State Ag. Society. A man who knows so well how to get possession of the best animals, will be likely to know equally well how to take care of them after he gets them. We therefore copy the following from the Transactions of the N. Y. S. Ag. Society, for the benefit of those who have been too much in the practice of suffering their cattle to take care of themselves, and which will be more appropriate especially at the present season:

"All the cattle have 'good care' *every day* in the year. They are housed in the autumn as soon as the atmosphere becomes cold, and are fed on hay, corn stalks, pumpkins, &c., &c. When the winter is fairly set in, the grown cattle have a feed of hay in the morning, and a portion of carrots to each, as long as the roots last; they are then let out to water and exercise, during which time the stalls are cleaned and fresh littered. This duty requires about an hour. They are then housed again, and supplied with oat or barley straw, being also well *brushed and curried*. At two o'clock P. M., the mangers are cleared out, which affords litter, and a fresh supply of straw is fed to each. At night they are again watered, the stalls are cleaned, and have a feed of hay and straw mixed. Toward spring they are supplied with as much hay as they will eat, and carrots are given more freely. The hours for feeding are regularly the same, and it is very noticeable that when the food is consumed, they will lie down on the clean litter, not caring to rise until the approach of their next feeding hour. Salt is always kept within their reach. An addition of four quarts of oat meal is daily given to such cows as are expected to calve within the period of two weeks. The calves are at all times carefully attended to. They are kept warm, well littered, and well fed. They have two quarts of oat meal per day, a few carrots, and as much hay as they can consume. Such is also the general outline of Mr. Osgood's system, and of most careful farmers."

Breeding Poultry—The Dorkings.

Dear Sir—In looking through the last Cultivator, I observed an inquiry about Dorkings, which you refer to some one more conversant with the subject than yourself. Without assuming that position, I will venture to offer you a few remarks, based upon my own observation and experience.

It must have fallen under the notice of all breeders, that small accidental variations are to be met with in the purest bred families of domesticated animals, and when thought desirable may be so taken advantage of as to become an established feature. Such, for instance, has been the case with certain families of the sheep-dog, which are now born with only the rudiment of a tail. The yellow and variegated color of the caged canary bird is another instance, which, in its wild state, is green—so with the English rabbit, which, before domesticated was uniformly grey, but is now bred of various colors, and with what is termed a "dewlap"—and more striking still are the numerous peculiarities which have been added to the "Fancy Lops." All these deviations from the originals, are unquestionably the result of selection with intent to render them hereditary, and that, too, without any interference with purity of blood. On the contrary, when varieties are produced by cross-breeding, purity of blood is of course sacrificed, and it will be found that the departures are uncertain; unconfined to any one point, and often destructive of some valuable property.

Now, as to the inquiry of "A Subscriber," I should have no question as to the purity of his birds, notwithstanding the scalp-feathers he mentions, if they *uniformly* and *undeviatingly* possess *all* the other characteristics of the breed.

When Mr. A. B. Allen (who appears to have taken great pains in obtaining the Dorkings he brought over with him from England,) sent me the birds I requested him to purchase for me, one of them was slightly crested; and, at the time, liking the appearance, I soon, by care and selection, bred up a yard of such fowls. I have three distinct *yards*, not divisions or pens, but three *farm-yards*, of pure Dorkings, *each family* possessing a *distinctive* feature, and a most *striking uniformity* of form and feather, with all else belonging to the Dorking. This of itself, to a breeder's eye, would be evidence enough of their purity; but it so happens that every bird is descended from fowls imported direct from Surry, either for, or by myself; and as I keep no other variety, from the fear of an accidental cross, they can hardly have lost their purity in my hands. I presume, if desired, that scalp or crest might, by

selection, be increased to a crown or top-knot, and yet the birds retain all their purity.

Before leaving this subject, allow me a word or two on the absurd attempts made some time since, to claim *exclusive* purity of blood for the White Dorking, and to rule out, as impure, all colored fowls! I was a school-boy in Surry, the land of the Dorkings, and passed many a holiday at Berry Hill, (then the seat of the late Robert Barclay, Esq.,) situated close to the village of Dorking, and, as might be supposed, the peculiar fowl of the country was here to be seen in its highest perfection, but they were of various colors, white, brown, and speckled.

What does John Timbs say in his "History of Dorking and its Environs," published many years since, page 100, of the second edition?

"There is also a breed of fowls with five claws, well known among poulterers in the metropolis, by the appellation of Dorking fowls; one sort is perfectly white, and another of a partridge color. Columella, in his Husbandry, describes fowls of this kind; and it is conjectured that they were originally brought here by the Romans."

Again the engraving of the "True Dorking," as put forth in the *prize essay* of the Royal Agricultural Society, on poultry, is a *richly colored* bird, with a double or rose comb.

At the yearly exhibitions of poultry in the Zoological Gardens, are to be seen Dorkings of various colors, with only now and then a cross of white birds, all eligible for premiums. Yours truly. R. *Morris, Otsego Co., N. Y., Nov.* 17, 1852.

A Decided Specimen of Book Farming.

The report of JOHN HAROLD, corresponding secretary of Queens county, furnishes us a specimen of the success of a man, who dared to look deeper into the furrow than the horses who drag the plow through it, and who boldly broke through the brick-like, hard-pan crust, three inches below the surface, and over which the share had passed from time immemorial.

"I have before me," says J. Harold, "the diary of a farm so worked, the character of which was, 'that hay enough could not be raised on twenty acres to keep a horse.' The owner of this land became a member of our society; a new impulse was given to his labors, and from having read and heard how otehrs were improving their farms and increasing their crops, he was desirous of doing the same. Eagle D. plow was procured from Ruggles, Nourse & Mason, and in the fall of 1844, a seven acre lot was plowed up ten inches deep. When the first land was plowed, the neighbors came round to see the folly, as they termed it, of the book-farmer. One said he was killing the land in plowing up the yellow clay; another, the lot would not be worth so much as before by twenty dollars per acre; and another, he would find it all out next year. It was, however, all plowed, and pretty yellow it looked. By next spring it had changed to a brown color, and was planted with potatoes, which produced a good crop. Still the neighbors said it would never raise grain or hay; it was quite killed for all that. In Septembr, 1845, it was well plowed, and manured with home-made poudrette; two bushels of white Hutchinson wheat, twelve quarts of timothy seed, and in the spring, ten pounds of clover, sowed to the acre. This seven-acre lot produced the next year thirty-four bushels of wheat to the acre, weighing sixty-two pounds per bushel, and was exhibited at our county fair, receiving the first premium. This was a hard fact to get over; some decided it was all owing to the season, and some, it happened to be sowed at the right time of the moon. The lot has now been mowed five years, and was considered this year the best piece of timothy grass between Hempstead and Brooklyn, (twenty-one miles.")

The town of Hempstead, in the same county, furnished the same year, a crop of potatoes on the fourth of an acre, amounting to 63½ bushels, or 254 bushels per acre. A two-year pasture was plowed *seven inches deep*, and planted with corn, manured with poudrette in the hill, followed the next year with the potatoes after 50 one-horse loads of horse manure. The rows were two and a half feet apart, and the potatoes 10 inches apart in the row. The cost of this quarter acre crop was $17; the net profit over $30, or $122 per acre.

The Pigeon Hole Borer.—*Tremex Columba.*

MR. TUCKER—A few years since, on visiting the garden attached to one of the public buildings of our city, I had occasion to remark the withered and dying condition of a beautiful maple, which for a long period of time had been the pride and ornament of the place; and many were the conjectures among individuals in the vicinity, respecting the cause of its premature death and decay. During the month of August of the succeeding year, when I again visited the spot, the branches had all been broken from the tree, and the bole, to the height of about eight feet from the ground, alone remained, and this was partially denuded of its bark. On the surfaces of these bare and exposed parts were to be seen, promiscuously scattered about, a considerable number of circular holes, averaging about the size of an ordinary goose quill, some of which had their orifices still closed up by the raspings of the wood through which these perforations had been made. Upon splitting off several portions of the trunk, and exposing the internal structure to the sight, it exhibited an immense number of ramifying channels or grooves, diverging in every direction through the wood, and directly communicating with the many openings on the surface of the tree. On a closer inspection, most of these channels were discovered to contain beautiful specimens of a species of Hy-

menopterous insect in all its various stages of existence, from the ova up to the imago, or perfect state; many of the larva obtained from the center of the tree were observed to be mutilated and dead, exhibiting evident indications, that their destruction had been accomplished by the aid of some parasitical, or egg-depositing insect; the internal portions of what remained having afforded to these depredators, a sufficient nourishment, until they became ready to emerge in a perfect form, to the open light of day. Those that were procured from near the orifices that still remained closed, were all in either a chryslis or perfect state, the former being enclosed in a membranous, soft, and translucent case or covering, through which the entire form and proportions of the insect could with ease be distinguished. On submitting the perfect insect to an examination, I had little difficulty in determining it to be the one here figured, the *Tremex Columba*, (Pigeon hole-borer) of Say.

From various circumstances, I am inclined to believe that the natural habit of this insect is, to deposit the eggs within the bark near the base of the tree; if so, to white-wash the trunk for six or eight feet from the ground, or give it a copious washing with some of the various materials so strongly reccommended by many different authors, and ordinarily made use of for the purpose, together with destroying the female whenever met with, or thrusting a red hot wire into the orifices, and thus causing the larvæ to perish, may, in all probability, effectually protect the trees from any of their future depredations. These grubs are frequently destroyed by the larva of the *Pimpla lunator*, the egg of which, having been deposited in their bodies, while committing their depredations in the heart of the tree.

Tremex Columba is embraced in the second tribe of *Hymenoptera*, and belongs to the family *Urocerida*, or horn-tails, so termed in consequence of being furnished with horny points at the extremity of the abdomen. The body of the female is cylindrical, and about as thick as an ordinary lead-pencil, being an inch and a half or more in length, exclusive of the ovipositor, which is an inch long, projecting three-eighths of an inch beyond the extremity of the body. This latter, rounds upwards, like the stem of a boat, and is armed with a pointed or sharp horn. The head and thorax are of a rust color, varied with black. The abdomen is black, with seven ochre-yellow bands across the back, all of which, with the exception of the first two, are interrupted in the middle. The borer, and a round spot at its base, impressed as if with a seal, are of an ochre-yellow color. The antennæ are rather short and blunt, of a rust color, and with a broad black ring in the middle. The wings, when expanded, are two inches and a quarter or more in extent, smoky brown, and translucent. The legs are of an ochre-yellow, with blackish thighs. The ovipositor is of an awl or needle form, and about the thickness of a bristle, with a spear-pointed termination, and black in color; when not in use it is concealed between two nar ow side-pieces, which furnish to it a species of scabbard or sheath.

The male is not furnished with a borer, and is extremely unlike the female, in color, form, and size. The color is that of rust, variegated with black, with the antennæ of a dark rusty yellow. The wings are of a smoky tinge, but much clearer than those of the female. The abdomen is rather enlarged behind, somewhat flattened, and terminates with a conical horn. The hind legs are much wider than those of the females, flattened, and of a blackish color; the remaining ones are of a rust color, more or less shaded with black. The body varies from three quarters of an inch to one and a quarter in length; and the expansion of wings, from one and a quarter to two or more inches. The larvæ is of a cylindrical shape and of a yellowish white color, with a rounded termination and a horny point on the upper portion of its extremity. It is an inch and a half in length.

In the months of July and August, these insects may not unfrequently be met with in some considerable numbers, the females employed in depositing the eggs in the wood of the trees on which their larvæ feeds; and the males, hovering leisurely about, as if for the purpose of inspecting the progress of the operation. This is accomplished by the female in the following way: After selecting the desired spot, she elevates the abdomen, and curves its extremity in such a manner as to bring the ovipositor in a perpendicular position directly beneath its center, then by a series of wriggling motions, plunges it about the distance of an inch and a half, or more, through the bark, into the solid wood, and in this orifice plants a single egg. The larvæ, on being hatched, gnaws its way into the heart of the tree, for some six or more inches in depth, and there remains securely, committing its depredations, until the period arrives for its change into the chrysalis state, and in no great length of time after, to emerge into its perfect form, again fully prepared to renew the process of regeneration. JAMES EIGHTS. *Albany, Dec.* 1, 1852.

HEAVY WHEAT AND OATS.—At the late Provincial Exhibition of the New-Brunswick Ag. Society, the prize for the best sample of Wheat, was awarded to a bushel which weighed 68¼ pounds. There were five samples which weighed 67 lbs., and more than 20 samples weighing from 63¼ to 67 lbs. The prize Oats weighed 53 lbs. to the bushel, and 14 other samples weighed from 46 to 52 lbs.

Horticultural Department.

Native and Foreign Fruits.

MEN generally have a remarkable proneness to extremes. Some years ago, a few of our most eminent pomologists, with great liberality and enterprize, imported largely of foreign varieties of fruits, among which were new sorts of pears by hundreds. Some of the hundreds proved quite valuable, and many more became at least fashionable, and nurserymen and cultivators generally throughout the country, eagerly sought these new sorts, to fill their catalogues and to plant in their grounds. A foreign name, thickly peppered with French accents, became of itself almost sufficient to recommend the sale of any new sort.

But this fashion had its day. Cultivators came to find, after the first varnish of novelty wore off, that most of these new foreigners were nothing but simple and plain third or fourth rate pears, and most of them, in fact, were rejected as worthless. Just as examples, the reader may look at the history of the *Reine des Pays Bas*, *Belle et Bonne*, *Belle de Bruxelles*, *Colmar d'Aremberg*, and the *Great Citron of Bohemia*. The trees which had been brought at great expense, "a thousand briny leagues," became indeed absolute nuisances, at least many of them, and they were replaced with others having such simple home-spun names as Bloodgood, Buffum, and Dix. The current now set entirely in favor of the Native American party; all foreigners were regarded at least with suspicion; and we have even seen, in one of our horticultural journals, those old European varieties, the Virgalieu and Bartlett, designated as *American Seedlings*, on account, undoubtedly, of their hardiness and fitness for our soil and climate.

We could never perceive why the seed of a pear grown on and dropped into the soil of France or Germany, should produce a sort, unfitted, essentially, to a similar soil and climate, in a different longitude. The truth is, some of our hardiest and most vigorous trees, bearing the heaviest crops of fine, smooth, and valuable fruit, and uniformly succeeding in a large portion of our country, are of those sorts whose origin happened to be on the other side of the Atlantic. Among these we may name the Flemish Beauty, Louise Bonne de Jersey, and Vicar of Winkfield pears, and the Gravenstein and Astrachan apples.

As a general rule, the known native fruits of any country, are best adapted to that country—and why? Because out of many thousand seedlings, they have been selected as the most fitted to that peculiar region—experience showed them the best adapted to it—but there might have been many others among those thrown aside, better adapted to other parts of the world. This opinion is proved by the fact that some foreign fruits are actually better here than in their native localities.

Every fruit-grower is aware that certain fruits succeed in one place and fail in others; and that the same sorts are more likely to succeed in contiguous districts, than in such as are widely separated. But a difference of latitude is usually far greater in its results than a difference in longitude. Hence the northern and southern portions of the United States, as for example, New-England and Carolina, may be far more unlike than corresponding portions of Europe and of the Northern States.

Experience, after all, and not mere general theories, must decide the fitness of all fruits for cultivation among us; and as an index to the result of this experience, we point to the selected lists of the American Pomological Society. These lists are made up promiscuously of American and foreign sorts. It is often asserted that we are obliged to take a part of the foreign sorts from necessity, our country being yet in the infancy in the propagation of sorts. This is quite a mistake; among apples, for instance, we find most of our best sorts of American origin, simply because America exceeds beyond comparison all Europe as an apple-raising country; neither has it been much behind other countries in regard to time, for it was not a long period back, that the whole catalogue of European apples was a very meagre affair. Of *Pears*, the select list of the American Pomological Society, gives us more than twice as many foreigners as Americans, because pears in Europe stand more nearly than apples an equal chance with us, and hence the efforts there made in raising new sorts, exceed ours, although we have not been asleep on this subject. Our peaches are nearly all of our own producing; our cherries mostly are borrowed from our neighbors across the water.

The opinion to which we more particularly object as erroneous, and to controvert which we make these remarks, is, that there is a certain degree of *inherent* feebleness or unsoundness in all varieties of foreign origin, and that it is unsafe to adopt them for extensive cultivation; and that American varieties alone possess sound constitutions, and are therefore only fitted for long endurance. We believe this notion to be fully disproved by the fact that a large portion of our best and thoroughly proved standard fruits are of this class, among which we may name the Madeleine, Flemish Beauty, Louise Bonne of Jersey, Urbaniste, Winkfield, Beurre d'Anjou, Bartlett, and

Winter Nelis, among pears; and Black Tartarian, Elton, May Duke, Black Heart, and Black Eagle, among cherries. We will not adduce the extraordinary success which has attended the cultivation of that celebrated old French pear, the White Doyenne or Virgalieu, in large districts of the Union; for the cracking and failure of this pear in some other districts, is pointed to as a proof of the comparative worthlessness of imported varieties, nothwithstanding that some recent American pears have been found to crack quite as badly at the same places, and in the very neighborhood of their origin.

Interesting Facts in Fruit Culture.

The Reports of the State Fruit Committees to the American Pomological Society, at its late session in Philadelphia, contain many valuable facts, some of which we present to our readers.

Mulching.—In the Report from Maine, the committee state that very little rain fell throughout the entire summer months, and that the value of mulching has been seen in an eminent degree in the case of newly planted trees, which made a fine growth; while of those not so treated, many failed, and others barely survived.

Period of Ripening—The same report informs us that heat and drouth have caused some pears to ripen prematurely and irregularly, so that on the first day of autumn they had ripe at once, Dearborn's Seedling, Rostiezer, Bartlett, Beurre d'Amalis, Belle Lucrative, Flemish Beauty, and others.

Curculio.—In the neighborhood of Bangor, Me., we are assured the curculio appears to have suspended operations, at least for the past season. Now, it would be exceedingly interesting to some of us in other places, where these indefatigable little scoundrels place their death-stamp on every thing they can find, to know the cause of this escape—perhaps if we knew, the thing might be done again.

Baldwin Apple.—We observe the same complaint, noticed by other observers, of the great liability of the young trees of this otherwise admirable apple, to be winter killed in this northern locality.

Pears in Maine—It has been found by the use of the Angers Quince, and a careful selection of sorts adapted to it, that many varieties can be grown in the highest perfection, which either entirely failed on the pear root, or would not repay the trouble and cost of cultivation. Among those mentioned, the Bartlett has been found hardier on the quince—the Winkfield good, often very good, improving with the age of the tree—and can be grown cheaper per bushel than any other pear. The Seckel proves a failure in four cases out of five, the trees neither growing nor bearing. The Flemish Beauty, (grown only on pear stock,) "combines more good qualities than any other pear," a character it is likley to assume in other states.

Gooseberries.—Houghton's Seedling bids fair to surpass all others in value. Its three great points of value, are 1, its free growth and facility of increase; 2, its profuse productiveness; and 3, its perfect freedom from mildew. The Maine Report informs us that Joseph Sinclair of Levant, purchased in 1848, for 25 cents, one plant of this variety—which he has increased by layers and slips, so as to sell over *fifty dollars worth since*, besides a hundred plants now on hand. Prof. Turner states in the Illinois Report, that Gooseberries, (English,) do well with him, "when well pruned, manured, salted, and mulched, in early spring, *never without*."

Northern Spy in Vermont.- The Report states, that this apple is "not yet fully proved, but no apple grows better, or appears more hardy. Fruit this season fair, and looks as well as any sort whatever—has not fruited before in this state, except a few specimens."

Red Astrachan.—In Maine this apple is thought to succeed even better than in other parts of New-England; in Vermont, it is "hardy and very fair;" in New-York, its value is well known; the report from central Pennsylvania states that it is "acid and dry."

Northern Autumn Apples.—The Duchess of Oldenburgh and the Gravenstein, are both spoken of as succeeding admirably throughout the northern regions of the Union—the latter as perhaps the best autumn apple of Vermont. An interesting fact as to the season of ripening of the Gravenstein has just been related to us by Major PATRICK, of Sacket's Harbor. The neighborhood of his residence is raked in two directions by the piercing winds from the north, and across the icy portions of Lake Ontario from the west. It is a severe climate for fruits. The result is, that the Gravenstein has become a *winter* apple, good and well kept specimens of which he has eaten in spring.

Fruit for Family use.—W. G. Waring, of Center Co., Pennsylvania, says that a family of eight persons, having free access to fruit during the entire season, consumed *three bushels* of apples to one of wheat, with a corresponding proportion of other fruits, with the greatest advantage to their health. There is at present, a very feeble approach to such a supply for the whole country.

Swine for the Curculio.—The same writer states, that the plum crop, when unprotected, is

usually entirely destroyed by this insect—but that keeping swine in the plum yard, after five years trial, proves very successful. J. C. Holmes, of Michigan, saves effectually his rarer sorts, by bags of mosquito netting.

Smokehouse Apple.—For Pennsylvania generally, and for some parts of Virginia, the Smokehouse Apple is spoken of in the highest terms by many cultivators; the growth of the tree in the nursery is, however, pronounced crooked in the extreme. The Republican Pippin is reported to be a poor bearer.

White Doyenne in Delaware.—In the excellent Report on Pears, by E. TATNALL, of Delaware, we are informed that this variety, on pear stock, is an entire failure, cracking before half grown, and becoming perfectly worthless; while the tree is more subject to the blight than any other. (This latter defect is the more remarkable, as in Western New-York, and some other regions, where it succeeds so well, the tree is unusually free from blight.) On quince stock, in wet or cold soils, it is no better; but on high, dry, and rich soils, it is almost wholly free from crack or blight, and grows vigorously. This disease is the same (on pear stock,) from whatever source the trees are received; while cases have occurred where trees on quince have been all received from the same nursery, and were modified into good or bad, entirely in conformity to the soils on which they were placed—all showing conclusively that the diseased stock theory is incorrect.

Productive Strawberries.—Joshua Pierce, of Washington, furnishes the statement of John Slater, of the amount of a crop of Alice Maude Strawberries. This variety is stated to be at least twice the size of Hovey's Seedling, at that locality. The bed contained about 30 square rods—it furnished about 40 bushels of strawberries, (over 1,200 quarts,) or at the rate of 213 bushels per acre. The rows in the beds were 2 feet apart, and the plants 8 to 12 inches asunder in the rows; and they were kept clear of weeds and runners.

Severe Cold in Virginia.—The report of Yardley Taylor, of Loudon county, states that the thermometer sunk there, the past winter, to 10° to 14° below zero, destroying at least one-half the peach buds.

Prof. Turner's Theory of Pear Blight.—The professor comes out again at some length, in defence of his position, advanced some months since in the horticultural journals, that the pear blight is caused by a peculiar insect. Further observation satisfies him that he is correct so far as that region of country is concerned. A remedy, founded on his observations, he hopes, (and only hopes,) may prove of lasting efficacy.

Trees on his own grounds, "promptly treated with soap and tobacco water, spirits of turpentine and lampblack, are thoroughly restored; while a single row, omitted for want of time, until the insects had hatched and gone into the bark, is still as badly diseased as ever. On the contrary, one gentleman, one mile from me, omitted all care of his trees; they were about 10 or 12 inches through, and the finest in the country. But they are all now dead, or worse than dead. Another gentleman, two miles distant, sceptical at first, applied whale-oil soap to the blighted trees, with a caustic alkali to dissolve it afterwards, and all his trees are now, as he informs me, perfectly free from blight." Soap suds, it is stated, effected as great a change in an apple orchard. These are very strong cases, so much so as to induce a shade of fear that Prof. Turner may have been deceived. At all events, we do not see the necessity of a *caustic alkali* to dissolve whale-oil soap, as we have always found *water* alone quite sufficient. Whatever effect turpentine and lampblack may have had, it would be very imprudent to leave this mixture for a long period on the trunks of trees in the State of New-York, as the hot sun on the lampblack combined with the influence of the turpentine, would, to speak colloquially, soon "finish the job."

Species and Varieties Explained.

In the Review of Thatcher's American Orchardist—(old) Genesee Farmer, vol. 4, p. 65, the following quotation occurs: "Trees raised from seed, rarely produce the same *species* of fruit with that from which the kernels were taken;" to which the reviewer appends these remarks:

"We are the more willing to notice this sentence because the writer is not alone in the misuse of the word in italics; and we recommend it to all those who have occasion to write on the subject of plants, to learn the precise meaning of the words, *species* and *variety*. It is well worth a study of five minutes. All the plants that originate from the same kind of seed, untainted by adulteration, are of the same *species*. Thus the seed of the common apple never produces a pear, a quince, or a crab; but seeds of the common apple produce different trees that *vary* in the qualities of their fruit, the size of their leaves and the appearance of their branches,—as the Fall Pippin, the Russett, and the Spitzenburgh. These are *varieties*."

It is now more than eighteen years since I wrote that review; and think it might be useful to repeat those precepts. To florists, I would give another view of the subject,—first presenting N. Webster's definition: "*Species* are capable of uni-

form, invariable, and permanent continuance by natural propagation. A *species* may include many *varieties.*"

Thus the oriental *species* of Hyacinth (*Hyacinthus orientalis*) has run into hundreds of *varieties*, some double, some single, some white, some red, some yellow, some blue, and some purple; and a similar remark, with not more than one exception, may be made respecting the common *species* of Tulip (*Tulipa gesneriana*), and its uncounted *varieties*. Some *species* of Pæonia have also several *varieties*, as *P. officinalis* which has produced the old double crimson, the double roseate, and the double changeable, or *albicans*, besides many other *varieties*. So also *P. albiflora*, while it retains its *specific character* under every change,—has given us double and single *varieties*, varying from deep red, or purple, to the purest white. David Thomas. *Greatfield*, 12 *mo.* 2, 1852.

Rural Culture.

Trimming Evergreen Hedges.—The American Arbor Vitæ, called White Cedar in Western New-York, endures shearing better, perhaps, than any other evergreen. We have seen a hedge of this tree on the grounds of J. P. Cushing, of Watertown, Mass., fourteen years old, and kept sheared down to five feet in height, which was so smooth and dense as to appear like a perfect wall of verdure. The *red* cedar usually suffers under the shears, or does not thicken well below. Without shearing, it makes a beautiful screen. Hemlock shears well. Balsam and Norway firs may be shaped by pruning, but should not be sheared closely.

Insects in the Soil.—Soils sometimes become filled with insects. Salt, at the rate of 8 or 10 bushels per acre, has been recommended; but a better way, and especially on old, much worn clay gardens, is to *burn the earth.* It may be accomplished by procuring a large quantity of chopped brush, and covering layers of it with a few inches of the soil during the driest part of autumn, and then setting fire to the whole. A mixture of old straw will assist the combustion. Independently of the destruction of the insects, the improved fertility of the soil will be of great value.

Buckthorn Hedges.—To do well, these must be planted in rich, sub-soiled or trenched land, and be kept cultivated. By such treatment, a few years will make a very stiff hedge. Without it, we have seen a hedge continue for years, making but little growth. Hedges, which would otherwise have been good ones, have also been spoiled by not shearing them *narrow at the top;* the full breadth being permitted above, shaded the lower part, and it consequently became thin and leafless. The Buckthorn must not be planted in very shaded situations; we have seen many failures from this cause alone, at Brookline, Mass., and in other beautifully shaded rural places.

Rapidly Growing Trees.—Perhaps the most rapidly growing *evergreen* is the Norway Fir—much exceeding in this particular the Balsam, Arbor Vitæ, or White Spruce. On a deep, good soil, it often shoots up four or five feet in a season. The White Pine is a good grower. Among *deciduous* trees, the Silver Maple (*A. dasycarpum*) is one of the very best, far outstriping the Sugar Maple. The Silver Poplar is scarcely equalled by anything, in the speed with which it expands from a small twig into a large tree; and its glittering silvery foliage is certainly very beautiful. But it throws up suckers beyond all endurance, if near a dwelling or garden, and must therefore be very sparingly introduced, and be planted remote from cultivated ground, where a dozen scores of suckers cannot prove an inconvenience or injury.

The Four Finest Roses.

The interesting semi-annual report made to the Horticultural Society of the Department of Lower Seine, by A. Peron, its recording secretary, furnishes a statement which will be valuable to rose amateurs. After remarking that rose culturists were formly satisfied with twenty-five sorts, as comprising the whole catalogue, he states that hybridization has now increased this list to at least *three thousand*, from which roses can be had every day in the year by attention to shelter from the cold, heat, moisture, and wind, by transplanting, training, nipping, and by fire heat. But it becomes rather a puzzling test for a novice to make a proper selection out of three thousand different roses, the bare examination of which would occupy him about one whole week, if he should spend but a minute upon each. In order to trim down this great catalogue, an effort was made to reduce it to *one hundred and fifty* of the very first—the first pick—all of which should be real paragons of beauty. Six distinguished judges were selected, and their votes stood as follows:—

4	roses rec'd each	6	votes, or were unanimously approved.
8	"	5	"
26	"	4	"
49	"	3	"
53	"	2	"

The four standing at the head, were *Duchess of Sutherland, Geant des Battailles, Souvenir de la Malmaison*, and *La Reine.*

Every Thing in its Place.—The man who loses half an hour daily going for or hunting displaced tools, loses 150 hours per year, or about half a month working time.

'Trump," the property of Mr. ALLEN AYRAULT, Geneseo, Livingston county, N. Y.,—received the first premium for Hereford bulls over three years old, at the Show of the New-York State Ag. Society, 1851. He was bred by WM. H. SOTHAM, long known as an importer and breeder of Hereford stock. "Trump" is a capital bull. The figure gives a good representation of him, except that it is too thick and coarse in the buttocks. He is a good constitutioned, well-made and thrifty animal, and would produce stock which would prove well either in the yoke or stall.

Trans. of the N. Y. State Ag. Soc. for 1851.

This, like its predecessors, constitutes a collection of facts, speeches, reports, and essays, of the highest value. Since the publication of the first volume for 1841, there appears to have been a progressive increase in the interest and ability which have characterised their contents; and now, this eleventh volume, of nearly one thousand pages, fully keeps pace with the upward course of the series.

Among all contained in this large fund of rural knowledge, the Essay on the Agricultural value of Phosphate of Lime, by JOSEPH HARRIS, of Rochester, and the Report of Secretary JOHNSON on the Great London Exhibition, are especially conspicuous. The former is marked with thorough scientific knowledge, combined with clear discriminating judgment, and sound practical application; and the latter is distinguished by an interesting and full account of those objects at the great fair which more particularly interest the American Farmer. In addition to these works, the Agricultural Survey of the County of Madison, by GURDON EVANS; the prize essay of W. C. WATSON, on Sandy Soils; C. E. GOODRICH'S observations on the Potato Rot, and accounts of of his experiments in the production of new varieties from South American seed; the Reports of the State Premium Farms; and the experiments of JOHN JOHNSTON, of Geneva, and of T. G. YEOMANS of Walworth, on tile-draining—are full of interesting facts and valuable suggestions.

To those of our readers who may not have an early opportunity to examine the entire contents of this volume, an abstract of some portions cannot fail to be acceptable.

Profits of Farming.

The statements furnished of the management of the four State premium farms, serve as a good answer to the hackneyed assertion that farming can never be made profitable, or that two or three per cent is all that can be expected from capital invested in land. The farm of N. HAYWARD & SON, of Brighton, Monroe County, contains 78 acres, 68 of which are "improved." The total expenses are given at $1,470, which sum includes 7 per cent interest on 10,000, estimated value of the farm, that is about *ten dollars interest per acre*, besides all taxes, cost of manure, labor, seeds, insurance, and even newspaper subscriptions. The receipts are $2,726, making the net profits $1,256—that is $18.48 per acre, after paying all expenses and interest. This is better than bank or railway stock. A few of the principal

items of this large amount of profits, are the following:—wheat, $404; hay, $106; potatoes, 161; peaches, $460; apples, $162; onions, $214; seed onions, $100; garden and farm seeds, $572, besides many crops of less value. It may be proper to state that the proprietors of this farm are among the best and most intelligent cultivators of fruit in the state, as the frequent premiums they have drawn from the State Society fully prove.

The farm of McCulloch & Kirtland, of Greenbush, consisting of 130 acres of land, chiefly occupied for dairy purposes, is managed at a cost of $1,409 per annum; on which the receipts are $3,358, leaving 1,948 as net profit, or about $15 per acre, out of which interest is to be paid on the land.

Albert G. Ford's farm, in Fairfield, Herkimer county, contains 130 acres, 95 of which are improved land. The manufacture of cheese is the chief business; the yearly cost, $926; the whole receipts, including $1,200 worth of cheese, and $510 of hay, are $2,396, or $1,460 net profits. This is a net return of eleven dollars per acre for the whole farm, or over $15 dollars per acre for the improved portion.

Now, such statements as these, (and we could furnish twenty more not unlike them from our own knowledge,) ought to convince all those who place the highest net profits on farm investments at three per cent, either that they are deficient in mental abilities, or have never informed themselves of the best modes of farming; and we advise them to buy at once this volume of Transactions, and read over carefully the statements of the admirable management of these premium farms, and see if they cannot make some improvement on their present superficial, skinning, earth-robbing system.

A Specimen of Neatness and Order.

Jefferson county has been long celebrated for its agricultural intelligence—at least of that most worthy portion of its citizens who have sustained its excellent agricultural society; and it stands very high on the catalogue of *dairy* counties. When, therefore, the particular dairy is pointed out to us, which took the first premium last year, and which still maintains distinctly its pre-eminence we cannot fail to regard it with a good deal of interest. This dairy, belonging to Amos Goulding, we are informed, consists of only twelve cows, "and had on hand, August 23d, 1,600 lbs., packed in 50 lb. tubs; adding one-third for the balance of the season, which is a fair estimate, will show a yield of 200 lbs. to the cow, over and above the use of the family; this, at 15 cents per lb., the price contracted for, will show the proceeds of each cow, from butter alone, at $30," or $40 at present prices. The committee which examined this dairy, are confident the butter is equal to any Goshen ever tasted by them. Now for the explanation of this success. The committee found that the proprietor possessed not only a model dairy, but a *model housewife*. "Every thing," say they, "appertaining to this dairy, every article and place, which came under the care of Mrs. Goulding, showed the marks of system, industry, and economy; from the kitchen to the cellar, everything was the same, a perfect model of neatness and good housewifery."

Culture of Potatoes.

I made one very satisfactory experiment the past season, on raising potatoes. On a good soil in the garden, I marked out a row (3½ rods in length) and on the level surface dropped the sets or cuttings about a foot apart in the the row. My hired man then immediately covered them three or four inches deep with straw from the stable, a very small proportion of horse dung being intermixed; and over this covering another of earth about as deep, was applied, giving it the form of a low ridge.

All the culture it received during summer, was the removal of a few weeds by hand.

In autumn, the whole crop (about two bushels and one-third) was readily removed from the soil by a long-toothed iron rake with a short head; and this was done nearly as fast as another person could gather them into a basket. I think we never raised so fine a crop of potatoes, and not the least appearance of *rot* was upon them.

An acre contains four thousand eight hundred and forty (4840) square yards; and these, if extended out in a right line, would reach two miles and three quarters—that is, there would be a strip one yard wide, of that length. But to come to the point—the rows in a potato field do well three feet apart. Now, if I had planted a whole acre in this manner, and if all parts of it had yielded as well as my short row, the produce would have been more than five hundred and seventy-five (575) bushels to the acre.

I would further remark that potatoes growing in moist land (though they never ought to) should be removed as soon as they are mature Part of our field crop was dug early, and very few traces of the rot were discoverable; but a part remained a fortnight later in the ground, and some were injured by the *dry rot*. This damage occurred where a moist streak led through the whole patch, and which would doubtless have affected the other potatoes, had they remained there. *Digging early*, as well as *planting on the surface*, I hold to be great improvements.

The *dry rot*, I can remember more than forty years; and it always occurred in wet ground. Such in the early stage of decay, are not materially injured for swine or cattle; but the *fetid rot* which came within the last few years, appears to be very different. DAVID THOMAS. *Greatfield, Cayugo Co.*, 12 *mo.* 2, 1852

Climbing Plants.

"As graceful as a vine," is a very common expression. Every one thinks the phrase quite poetical, and that is the end of it. *Grace* and *Beauty* are well enough to talk about, and serve for excuses for writing fine sentences, say our utilitarians; but were you to advocate that these are "qualities as positive as electro-magnetism," you would at once be set down as a hopeless sentimentalist.

Still, we are about to propose something which has no other recommendation than simplicity, beauty, and grace. It costs nothing, and will afford no pecuniary income; but it looks pretty. We wish to talk about the propriety of planting climbing plants to shade the windows, to relieve the monotonous color of the exterior of the house, to cover up every thing ugly, and to heighten the charm of every thing pretty and picturesque. No matter how rude and unarchitectural may be your dwelling; vines will give it a new character, and make it look home-like and cheerful. There never was a grand old mansion or princely palace, that would not look grander and more kingly for a vine to twine about its great pillars, whose green leaves and bright flowers would relieve its stern and imposing appearance.

A decoration of this kind, you have not to wait years to have completed; nor to consult with architects, or spend much time yourself to secure it. A wish will almost bring it. We quote Mr. DOWNING'S remarks as to the vines most suitable for cultivation in New-England and Middle states:

Our two favorite vines, then, for the adornment of cottages, in the northern states, are the double *Prairie Rose*, and the *Chinese Wistaria*. Why we like these best is, because they have the greatest number of good qualities to recommend them. In the first place, they are hardy, thriving in all soils and exposures; in the second place, they are luxuriant in their growth, and produce an effect in a very short time–after which they may be kept to the limits of a single pillar on the piazza, or trained over the whole side of a cottage; in the last place, they are rich in the foliage, and beautiful in the blossom.

Now there are many vines more beautiful than these in some respects, but not for this purpose, and taken altogether. For cottage drapery, a *popular* vine must be one that will grow anywhere, with little care, and must need no shelter, and the least possible attention, beyond seeing that it has something to run on, and a looking over, pruning, and tying up once a year—say in early spring. This is precisely the character of these two vines; and hence we think they deserve to be planted from one end o the Uuion to the other. They will give the greatest

amount of beauty, with the least care, and in the greatets number of places.

The Prairie Rose is of uncommonly rapid growth—shoots of twenty feet in a single year, being a not uncommon sight. The Chinese Wistaria is of more compact growth, and its blossoms hang in large bunches, from eight inches to a foot long.

A climbing vine in the garden, in the "front door-yard," and in pleasure-grounds, is particularly desirable. One great difficulty in the way of planting vines, is a want of some support. On the one hand, a lattice house or arbor is too expensive for persons of moderate means, and perhaps less taste, while on the other, ladders and stakes are forever rotting and breaking down just when they should not. The cut herewith given, illustrates a method of avoiding these difficulties in a very tasteful manner.

It is simply procuring the trunk of a cedar tree from 10 to 15 feet high, shortening in the side branches to within two feet of the trunk, and still shorter near the top, and then setting it again, as you would a post, two or three feet deep in the ground.

Cedar is the best; partly because it will last forever, and partly because the regular disposition of its branches forms naturally a fine trellis for the shoots to fasten upon.

Plant your favorite climber, whether rose, wistaria, or honeysuckle, at the foot of this tree. It will soon cover it, from top to bottom, with the finest pyramid of verdure. The young shoots will ramble out on its side branches, and when in full bloom will hang most gracefully or picturesquely from the ends.

The advange of this mode is that, once obtained, your support lasts for fifty years; it is so firm that winds do not blow it down; it presents every side to the kindly influences of sun and air, and permits every blossom that opens, to be seen by the admiring spectator. How it looks at first, and afterwards, in a complete state, we have endeavored to give you a faint idea in this little sketch.

Vegetable Nutrition.

Some writers affirm that all kinds of vegetables derive their nutrition principally from the atmosphere; that a rich soil only furnishes the plant with power to draw the nutritious gasses from the surrounding air. To prove this, it is said that some perfectly clean sand was obtained and moistened with distilled water, and the solutions of certain salts added to stimulate the young plants that had germinated, to enable them to draw from the air their principal nourishment; and that the experiment succeeded in producing perfect plants, and ripened seed.

I have been a pretty close observer of vegetable physiology, embracing all the functions of the various organs of plants, &c., and have long since come to the conclusion that this theory is erroneous. I am perfectly satisfied that plants obtain the material that adds to their substance, principally, if not entirely, from the earth; and that the action of the air upon them is very similar to its action upon the animal economy. It forms no part of the substance of nutrition, but acts as a purifier of the circulating fluid, and as the source of heat or caloric. I am satisfied that the leaves act the part of the lungs in animals, refining the nutriment that has been taken up by the roots and conveyed to the sap, and preparing it for appropriation by the various organs of the plant, to the formation of wood, fruit, &c.

If the theory of atmospheric nutrition were true, it seems to me the following difficulties would be insurmountable: some soils are so *rich* that wheat and corn cannot be grown upon them. Many of our rich bottom lands will produce immensely large corn and wheat plants, but no grain —they "run all to stalks and straw." Ground is often found too rich for some fruit trees. They make the most luxuriant growth of wood, but produce no fruit. On the other hand, many soils make very little wood, but produce abundance of fruit on the trees. I presume no one will question these facts, as they are very common. Then, if plants derive most of their nutrition from the air by means of the vigorous action of the plants, why do the plants in the above cases not produce fruit, corn, &c. I am aware that I shall be answered by the advocates of the atmospheric theory, that the soil did not enable the plants to collect from the air, the *particular aliment* required for the formation of fruit, notwithstanding the apparent vigor of the plants. But I am not satisfied with this answer. I admit the plants do not attract the particular kind of aliment from the air, but I insist that the air is not the place to look for it. To me the cause of the failure to produce fruit, &c., is very obvious—the earth or soil was deficient, not the air, in the element necessary to their growth.

Let us look at another point. It is known that wheat grown in the Genesee country—the whitest in the world, is deficient in gluten, the most nutritious portion of that grain. That same wheat when grown in the south, say in Cecil or Talbot co., Maryland, becomes rich in gluten. Again, there are farms almost adjoining in Maryland, that produce wheat entirely different in its quality of gluten. Now if the elements of nutrition of which the wheat is formed, are derived from the air and not the soil, how is it that the quality of the wheat is so different when grown on different soils? That the air exercises great power upon the plant I not only admit, but my theory of nutrition and of vegetable life, claims. As before said, the nutritious matters are taken up by the roots, and carried by the ascending sap of the plant to the leaves, in which they are exposed in their broad surfaces to the action of the air. The purified sap then returns, vitalised, as it were, downwards to the branches and body of the plant, its nutritious principle taken up and appropriated for the formation of wood, fruit, &c., as may be required. In the case of all annual plants, such as wheat, corn, &c., the whole of the circulating fluid is exhausted, the roots having ceased their functions as soon as the fruit is ripe, and the whole plant becomes dry straw.

I have hinted above that the air has something to do with the vitality of the plant, with its *living principle*. In this I believe that the air is the food that sustains or nourishes the vital principle. It is not life itself, nor the origin of life. As the earth furnishes the food that supports the material of the plant, the air furnishes the food that sustains the vital principle. There is a kind of combustion continually going on in plants and animals, through the aid of the air, from which animal and vegetable heat is generated, and this heat sustains the individual in life. The living principle itself, is derived from the seed from which the plant grew, and was originally imparted to the first plants at the creation. Do you not see in this view of the question, a beautiful illus-

tration of the sacred writings, in which it is said, "Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind, whose seed is in itself upon the earth."

It has been objected to the theory herein advanced, that if it were true, plants would grow and increase in size in winter as well as in summer, because the roots have access to the stores of nutrition as well in the one season as the other. But I adduce the same objection to the atmospheric theory. If plants derive most of their nourishment from the air, through the leaves, then they would not grow in winter at all. But all perennial plants *do* grow in winter. Measure the circumference of a thrifty young tree immediately after the leaves have fallen, and then again in the spring before the leaves put out, and you will find the tree has made considerable growth; not so much as it would have made in the same length of time in summer, but it will have made a very appreciable increase. This is attributable to the continued circulation of the nutritive fluid, and its appropriation by the plant, notwithstanding its deprivation of leaves. In this case I believe the *bark* of the plant exercises functions similar to those of the leaves, though to a less extent.

I do not know that this point in vegetable physiology, is of great practical importance to the farmer. The atmospheric theory might, if adopted, induce inattention to the supply of proper manures to the soil, and too much dependence upon a supply from the atmosphere; but the most strenuous advocates of it require that the same manures shall be applied to the soil that the objectors apply, to enable the plants to draw their nutriment from the air. So that it matters little which theory is adopted in practice.

Whether it is the oxygen of the air or the nitrogen, or the carbonic acid gas that is found in the air, that acts the part of vital air to plants, is a question I do not now discuss. One thing is to me certain, the atmosphere, in whole or in some of its parts, acts in vegetables as well as in animals, as a sustainer of the vital principle by generating heat, and this it does in winter as well as in summer, as may be very readily ascertained by inserting a thermometer into the center of a tree in a very cold day, when it will be found that though water shall be frozen a foot deep, and even more, by the side of the tree, yet the temperature of the tree will be above the freezing point; or, if the weather be so cold as to freeze the tree, yet the temperature in the tree will be found much higher than that outside. *

To manure and lime wet lands, is to throw manure, lime, and labor away.

Sowing Clover with Corn.

MR. TUCKER—I see in the last number of your Cultivator, some person inquires of you about sowing clover among corn, and as it is a common practice here, and our manner of doing it appears to be somewhat different from yours, I thought I would give you a brief account of it. As our oat crop here brings but a poor price, and is generally considered an exhausting one to our soil, a number of our farmers have ceased raising it, and instead of following our corn crops with an oat crop, as was our usual rotation here, we now always sow our corn fields with clover seed. We always sow it just after the double-shovel plow runs through our corn the last time. I sowed my seed this summer, in the first week of July, and the corn-field now looks fine and green, with a good coat of clover on it. A neighbor of mine has now one of the finest looking clover fields, done in the same way, that I have ever seen. I did the same thing last year, and the year before. It affords early pasture in the spring following; and then the cattle are kept off until after harvest, when it has grown up considerably, and is then turned under for wheat. I never turned under better clover than I did this fall, that was sowed in among my corn last summer a year. Of course we do not sow it as thick as if we would want to keep it for mowing or permanent pasture. We consider that it pays us much better in the way of pasture, and then in a manure for wheat, than the ordinary oat crop would after our corn. We seldom fail here in getting it to catch, unless the season is unusually dry, and then it partially fails.

We always sow it immediately after a rain, or directly after the plow, while the ground is fresh and mellow, and it will then start at once, and if the drouth does not kill it, you will have a fine crop of clover. A PLAIN FARMER. *Franklin Co., Penn.*

Stowell Evergreen Corn.

Mr. EDITOR—During the past season I raised a quantity of this new variety of sweet corn. It proved superior in all respects but one, and is undoubtedly a valuable addition to the farmer's crop.

You are aware that this is the variety which the learned Prof. Mapes asserts will keep green and plump, for table use, all the year round. My seed came from that gentleman, but the corn, according to my experience, *will not keep*, as he states. Perhaps I have made an error in the mode of preservation, though I followed the directions closely. If any of your readers have tried the variety, during the past season, I think they would benefit the public by sending you their results; upon the preservative qualities of this corn especially. E.

Geneva Trial of Implements.

Review of the recent Trials of Horse Powers and Threshing Machines, and the report of the same, by the Committee of the New-York State Agricultural Society, at Geneva and Utica, under whose supervision it was held.

If any thing were wanting to prove the great superiority of the Endless Chain Horse Power, patented by HORACE L. EMERY, over all others of its class—or if to prove the superiority and utility of endless chain powers over all sweep powers—it has at length been furnished by the report of the committee of the State Agricultural Society, on their trial of machinery at Geneva, in July last.

The trial was one of the largest ever had in this country, and probably in the world. It continued nearly two weeks, and was attended with a vast amount of labor and expense to all concerned, and seemingly every competitor returned to his home perfectly satisfied with the experiments to which their machines had been subjected.

Although the award for the best Horse Power was given the maker of the above Emery power, it is not of half the importance as is the report of the several severe tests to which all were subjected, as will be seen by reference to the report

Among other things, it says of the Emery power:

"The platform rolls over reels, furnished with clutches so "disposed that its action is nearly in a tangent to the circle, "and therefore acts to the best advantage. This arrange- "ment seems less liable to wear than any other, and the en- "tire contrivance and perfection of the work, gives to it a "marked superiority."

It may here be proper to state, on the authority of two of the committee, Mr. Howard and Mr. Holmes, (after publication of the report) "that in course of consultation upon the relative merits of the several other powers, it was considered in committee that this one had one-third advantage in utility over the best of the others," but it is nevertheless true that its relative utility was not over-estimated, as will hereinafter appear.

One of the first and simplest experiments tried with the several powers in this class, was to ascertain the relative amount of friction, or in other words, how much force was absorbed in friction by the powers when not attached to any machinery, and running at the velocity required for practical purposes.

It was as follows: Each Two-horse Power was placed at an angle of 13°, and two men placed upon the platform, and their gravity, (269 lbs.) allowed to move them as nearly as possible to that velocity required for threshing. As their weight was too great and the velocity too rapid, a spring balance or steelyards, was attached to the frame work at the fore end, and held by the men on the platform—and by this means the motion was retarded sufficiently for the experiment. As the position of the steelyards was the same on each power, and in a horizontal position, it was reckoned that whatever the draft in retarding the motion might be, the steel yards must show it, as they did; and it was assumed that whatever of the propelling force derived from 269 pounds, which is equal to about 62 lbs., was not absorbed in friction, must be shown upon the steelyards—or in other words, what was not upon the steelyards, was absorbed. The result of this experiment was as follows, after getting up and maintaining a uniform velocity with each machine:

Emery's—Velocity of platform required for threshing, 169 feet per minute; velocity in experiment, 292 feet per minute; steelyards showed 27 lbs.; absorbed by friction, 35 lbs.

Badger's—Velocity of platform required for threshing, 222 feet per minute; velocity in experiment, 200 feet per minute; steelyards showed 11 lbs; absorbed by friction, 51 lbs.

Westinghouse—Velocity of platform required for threshing, 135 feet per minute; velocity in experiment 152 feet per minute; steelyards showed 13 lbs; absorbed by friction, 49 lbs.

Thus showing, that while the Emery power did move nearly 75 per cent faster than required, the friction was but 35 lbs.—while had it been more retarded, the friction would have been considerably reduced below even 35 lbs., or about 25 pounds.

Badger's power, which was awarded the 2d premium, absorbed 51 lbs. while running at about its requisite speed for threshing, or 46 per cent more than Emery's power—and probably this difference would have been 75 or 100 per cent, had the velocity of Emery's been reduced to its usual rate.

This experiment was also applied to the One-horse Power, with the following results: with one man, weight 150 lbs., producing a power on platform of about 34 lbs.

Emery's power in experiment, 192 ft. per min.; 10 lbs. on steelyards; amt. absorbed by friction 24 lbs.

Badger's power in experment, 146 ft. per min.; 4¾ lbs. on steelyards; amt. absorbed by friction 29¼ lbs.

Showing again, while Emery's power absorbed but 24 lbs., while moving about 14 per cent. too fast, the Badger power absorbed 29¼ lbs., about its regular velocity, or 24 per cent. more friction than Emery's.

These experiments, which were taken with the utmost care and precision, and repeatedly corroborated by others succeeding them, are wholly left out of the report, while others of less pointed results have been recorded.

One of which was to attach the same threshing cylinder alternately to each power, with the same band, and by placing five men in the Two-horse Powers, to note the distance their weight would cause them to travel per minute, as also the number of revolutions of the cylinder produced in same time. The weight of the five men was 714 lbs., producing a force of about 161 lbs.

Experiment with the Two-horse Powers.

Emery's distance travelled, per minute, 218 ft.; revolutions of cylinder, 1,996.

Badger's distance travelled, per minute, 300 ft.; revolutions of cylinder, 2,160.

Westinghouse's distance travelled, per minute, 130 ft; revolutions of cylinder, 1,390.

As this experiment combines an attachment to machinery, and as the relative velocity of the cylinder to each foot, or the whole distance travelled, varies according to the internal gearing of the powers themselves, it becomes necessary to take that difference into our calculations, which we find as follows: The cylinder, when attached to Emery's power, revolves 9.15 times per each foot of platform—with Badger's, it revolves 7 1-5 times to each foot—and Westinghouse's revolutions 10.67 times. Thus showing that Badger's power geared 27 per cent. slower than Emery's and 48 per cent. slower than Westinghouse's, and should produce results bearing a relative proportion of increase over them.

Emery's therefore, as compared with Badger's should have produced but 1620 revolutions, but did 376 revolutions over that, thus showing Emery's to have exceeded Badgers's by 23 per cent—and Badger's to have equalled Westinghouse's, should have produced 2061 revolutions, while he did more by about 9 per cent.

These minutes are copied from the report, but the deductions are not. They are themselves, self-evident, notwithstanding the report to the contrary, which reads.

"From the foregoing table, (alluding to velocities and dis- "tances,) it is obvious that Badger's power works with the "least friction, or that gravity gives to his machine a greater "amount of useful power than to either of the others on tri- "al—being three per cent more than Emery's and fifty five per cent more than Westinghouse's."

It further says:

"Badger's power is well made, and in this respect deserves "much credit; yet in this excellence it is exceeded by Eme- "ry's."

"Badger's is a rack and pinion power, the lags being con- "nected by strong iron links, and the rack, though straight, "is provided with teeth increasing in depth as they approach "the exterior edges of the plates into which it is divided; and "each plate is perforated in the center, to accommodate the "convexity of the pinion while passing over it. This perfo- "ration weakens the pieces, and increases their liability to "fracture. A rubbing action seems to be inevitable, caus- "ing rapid wear."

Justice to the Emery power in this last experiment, requires the statement of the fact, that it was made at Utica some two months subsequent to the Geneva trial, and not with the understanding with the competitors, that it was to be made a part of the report; and while this power was transported from Geneva to Albany, and back to Utica by railroad, it became filled in all its gearings with coal and cinder from the locomotive, being on an open car. It became necessary to take its every part to pieces, and was cleaned as well as could be done under the circumstances—while both the others were different powers than used at Geneva—one being brought by wagon with great care to Utica, and the other in a box car, by railroad. This is named to show the cause of the relative difference in the trials of friction at the two places. This fact was made known at the time to the committee, but it is not noticed by them.

The One-horse Powers, which were transported in tight cars, suffered no inconvenience from coal and dust, and the results were as follows:

Emery's, with two men, travelled 104 feet, and produced 950 revolutions per minute.

Badger's, with two men, travelled 87½ feet, and produced 630 revolutions per minute.

According to the gearing as before, Badger's should have produced about 1,250 revolutions to have equalled Emery's—but came nearly 50 per cent. short of this standard.

Where has the report, as published, noticed this discrepancy in the One-horse Powers? No where. It simply gives the number of revolutions, without a comment Is it such a report as the statistics justify, or is it not?

Another experiment was made with each set of powers connected with threshers as in use, and six men placed on the several platforms, weighing 925 lbs., and the velocity allowed to equalize the power or wt. on the platform, and this

velocity noted for one minute, as follows—(rather an ambiguous method of reporting, to say nothing of the errors):

Badger's power, 150 revolutions of wheel, 10 in. of platform to each revolution=197 feet, gaining perpendicular of 44.32, feet, for 232 pounds, while it should read—

Badger's power, 150 rev., 10 in. each for platform,=125 feet equal to raising 925 pounds 28.11 ft. perpendicular besides its own friction.

Emery's power 140 rev., 10¾ in. each for platform,=207 feet, equal to raising 925 pounds 46.56 ft. perpendicular, besides its own friction.

Westinghouse's 256 rev., 7½ in. each for platform,=152 feet, equal to raising 925 pounds 34.19 ft. perpendicular, besides its own friction.

If this shows anything, it is that the Emery power and thresher combined, runs much more easily than either of the others.

Another experiment was, to place two men upon the platforms of the Two-horse Powers without threshers or steelyards, and allow the velocity and power (232 lbs. on platform) to equalise each other, and note the distance travelled—with the following result:

"Badger's power 218 revolutions, 10 in. each,=2 6 feet of platform, perpendicular elevation of 45.69 feet for 52.25 lbs." Supposing the 286 feet to be correct (which should be 190 ft.) the elevation would be 64.68 ft.—while it should read thus—

Name.	Number rev. of pulley.	Motion of p'tform to each rev.	Eleva'tion 232 lbs. besides frc'n.	Distance motion of platform.
Emery,.....	430	10¾	83.91 ft.	371 ft.
Badger, ...	218	10	42.97	190
Westinghouse,	386	7½	51.79	229

Thus showing conclusively the great difference in the friction of the powers themselves, as also with threshers attached, is in favor of the Emery power.

The next experiment is that of threshing grain with horses weighing 2,200 lbs., placed upon the several platforms, and a quantity of grain, 100 sheaves, weighed off to each competitor.

The travel of the horses, the time occupied, the weight of grain obtained, the velocity of the cylinders during the threshing of the grain, the number of men required, &c.

Name of maker.	Number of horses used.	Number of men employed.	Weight of sheaves threshed.	Weight of cleaned grain.	Time required in threshing.	Weight of horses used without harness.	Revolutions of Cylinder.
			lbs.	lbs.	m. s.	lbs.	
Emery, ...	2	5	810	169	10.30	2200	1550
Badger, ...	2	5	850	156	17.30	2200	1600
Westinghouse, ...	2	5	954	200	13.30	2200	1450
Pitts, Lever power and Self Cleaner,	8	7	934	194	5.30	draft. un'kn.	1350
Hall, Lever power and Self Cleaner,	8	6	1000	192	8.00	do	1650

From this table we obtained the following deductions, which will show the relative cost of threshing with the endless chain powers with great accuracy as the experiment was tried with every circumstance alike with each, and in a manner where there was no possibility of favoritism nor deception—as the whole work was done by the gravity alone, and each machine new, and horses not before used on any power.

Name of Power.	Distance travel'd by horses per min. in feet.	Ratio of grain to sheaves.	Pounds of wheat thrs'd per min.	No. of lbs. at same rate for 10 hours.	No. of bus'ls for 10 hs. at 60 lbs. per bushel.	Cost pr. bu'l with 5 men & 2 horses,	Cost per bu. with 3 men & 2 hor's, at same rates.
Emery's, ...	169.28	.201	16.09	9654	160 54-60	$.0373	$.0248
Badger's, ...	222.22	.183	8.91	5346	89 6-60	.0637	.0446
Westinghouse,.....	135.68	.209	14.81	8886	148 6-60	.0405	.0279
Pitts', Lever Power and Cleaner,.....	.....	.207	35.27	21162	352 42-60	8 hors 7 men. .0311	
Hall's do,.....	.....	.192	24.00	14400	240	.0458	

From the above it will be seen that the report charges each of the Endless Chain Horse Powers, with five men in attendance, while in no instance were more than three men engaged in these threshing experiments—and further, three men can as well manage either of them, as six or seven men can the larger machines; while they are charged with only that number. With the endless chain, the necessity of a driver is avoided, as the feeder of the thresher not only attends his own team, but has the whole under his control, and can check or stop the whole instantly, by means of brakes and lever.

It is also observable that the yield is little better than half a crop, while it is mixed with much weeds and grass, requiring about the same power and labor as it would to produce results double what we have before us. As the ratio of wheat to straw bears a very uniform proportion, these experiments form good data from which to make the following deductions:

The Emery power required the team to travel but 1.9 miles per hour, and with the force of gravity alone, threshed of this grain at the rate of 161 bushels per day, of cleaned wheat at an actual cost, with the three men, of less than 2½ cts. per bushel, which, cleared from the fine chaff with fan mill, will add somewhat to that sum, making say three cents per bu. over boarding, and calculating the board of three men and two horses at 37½ cts. each per day, will cost 4 cents and 1 6-10 mills per bushel, or in a good yield, about half that sum.

Badger's power requires over 2½ miles travel of team per hour, and threshed but 89 bushels of cleaned wheat per day, costing for three men and two horses, 4 cents 4 6-10th mills per bushel, or cleared up at 4 cents 9 8-10th mills, over board, or including board of men and team, 7 cts. and 8-10ths of a mill per bushel—or in good yield about half that sum.

Westinghouse's power required less travel of team, being but about 1.6 miles per hour, threshing 148 bushels per day, costing with three men and two horses, 2 cents 7 and 7-10ths mills per bushel over board, or cleaned up, 3 cts. and 2 9-10th mills per bushel, or including board, 4 cents 5 8-10th mills per bushel—or in good yield about half that sum, thus showing at a glance, that while Badger's team travelled 30 per cent faster, he threshed 45 per cent slower, costing 70 per ct. more per bushel than with Emery's power, and that with Westinghouse, the team travelled 19 per cent slower—threshed 9 per cent slower—costing ten per cent more per bushel than with Emery's.

It is proper to remark here, that Westinghouse was at one time the agent for selling the Emery power, and but recently has made the kind used at these trials, which, excepting an alteration in increasing the gearing, (to its disadvantage in strength and durability,) is in all other respects essentially the same as the Emery power, and is claimed to be a bare-faced infringement of his letters patent, and legal proceedings have been directed against him therefor—thus establishing beyond cavil the superiority of the Emery's Endless Chain Power over all others, and particularly the *rack and pinion*.

The writer would willingly stop here but for the reason that an unfair, equally erroneous and unjust comparision is made in said report, between the two premium machines in the different classes, which is wholly foreign to the subject, and drawn from prejudice or the want of a proper understanding of the long series of experiments accompanying the same, and is not deducible from any thing connected with the reports of the experiments.

Notwithstanding the report says—"These different classes "cannot be compared with each other, your committee have "viewed them as unconnected," in the very next paragraph it says, "The table shows Emery's machine requires twice "the time to perform the same work that Pitt's machine will "accomplish," then goes on with an ingenious calculation, and carries it through, showing thereby that grain can be threshed by Pitt's machine, just 3 and 7-10th mills less than with Emery's, and that, "This difference will pay the extra interest on "the cost of the larger machine, the expense of keeping it "in repair, and the cost of an elevator to remove the straw to "the stack-yard." Again it says, "These advantages be-"long alike to all the machines of the class of which Pitt's is "the representative," while Hall's, in the same trial, of the same class, and the next best, came, by the same rule, more than 44 per cent. short of Pitt's, while the public well know the relative merits of the two are barely discernible. And again it says, "An earnest endeavor has been used to ascer-"tain and record facts in relation to each machine, with the "nearest approach to mathematical accuracy, and from such "premises to determine merits and excellences," and in the

next line it says, "It would mislead the farmers of the State, "and do injustice to the inventors, if the results exhibited in "the above table are allowed to stand as a correct exhibit of "the ability of the several machines to separate wheat "from straw."

Next it assumes "360 lbs. grain as a fair yield from 100 "sheaves, and that 4,500 sheaves a day's work for Pitt's ma- "chine, making 270 bushels per day with 7 men=$7; 8 hor- "ses at $4—$11=4 cts. 7-10ths of a mill per bushel."

The next assumption is, that as it takes Pitt's 5½ minutes and Emery's 10½ minutes at Geneva, and that if 270 bushels is a day's work for Pitt's, then half that, or 135 bushels, is a day's work with Emery's, and the calculation includes five men, for even this small day's work, instead of three, costing per report, 4 cts. and 4 4-10th mills per bushel.

Now as the whole quantity threshed at Geneva averaged but 171 lbs. per hundred sheaves, in the above calculations the yield is more than double that at Geneva, and according to the same rate as actually threshed by Pitt's there, he would have obtained 743 bushels in ten hours, or just 2¾ times more than is reckoned a fair day's work in this "comparison;" or in other words, that Pitt's was working 2¾ times faster than could be kept up through a whole day, which is readily accounted for by those who witnessed it as the fatigue of the team after threshing 5 minutes 30 seconds, was greater than was caused by the whole threshing done on all the Endless Chain Powers which were operated by the same team in quick succession, requiring in one, and the last case, 17½ minutes, and in all 41½ minutes.

Now, where is the justice of reducing the quantity in good grain to 135 bushels, while 161 bushels was actually the rate of threshing poor grain, a deduction of over 16 per cent., while the Pitt's power, which has been shown to have been working 2¾ times faster than in the comparison, is made the standard, and its time alone considered as the index of its capacity.

To show the fallacy of this, let us reduce the trial at Geneva from 5 minutes 30 seconds to what it should have been, or 2¾ times=15 minutes 7½ seconds, which, compared with the correct time of Emery's threshing, which is 10 minutes 30 seconds, shows that instead of requiring more time, Emery's worked the fastest by 4 minutes 23 seconds, or 40 per cent faster than Pitt's, or equal in good grain to 378 bushels per day, instead of 135 bushels. This is good logic, and based upon the materials in the report and "comparison" there made.

If to these estimates be added to Pitt's the boarding of men and horses, the cost would come up to 6 cents 1¼ mills per bushel, while if the board of three men and two horses be added, (being all the force used unless the owners of the team are counted, who being fearful for the safety of their horses, no harness being allowed, attended and held them during each experiment, it being he first time they had been on a power,) the cost with Emey's power would be but 4 cts. 3 4-10th mills per bushel, making a difference in favor of Emery's machine of 1 ct. 8 1-10 mills per bushel, or 30 per cent. less cost, instead of 9 per cent. more than with Pitt's, as the "comparison" would have it.

Although 270 bushels is more than average days work for Pitts' machine, with any number of men and horses, and especially with 6 and 7 men and 8 horses—it is not unusual that 250 bushels, and in very many instances 300 bushels, have been threshed per day with the same team and four and five men all told, with the Emery power. While these numbers are not published as an average capacity for the Endless Chain Powers of Emery's Patent, two hundred bushels of wheat of average yield is their warranted capacity with horses weighing 1,000 pounds each, and four men to attend it.

So much for this "comparison." If the relative capacity, utility, portability, and cost, both of machines as well as running same, is not established in favor of the Endless Chain Power of Emery's Patent, not only over all others of its class, but over the best of the larger kinds of lever powers, by at least thirty-three per cent, then such trials and experience cannot establish anything.

As to the philosophical remarks in the report, concerning the momenta of cylinders, as also their construction as whole or open, or the use of various contrivances for reducing friction and proper lubrication of machinery, as also the simplicity of the construction of the premium thresher, with its teeth three inches long, (while the report says 1¼ is better,) &c., I must omit, or leave the the subject for another notice, or for those who are sufficiently qualified to comprehend so great a subject.

Having consulted several members of the committee, both before and since the publication of the report, and pointed out these errors, and learned from them that, having made their calculations, based on what they considered correct principles, they still adhered to the report, with a conviction they had done justice to the subject and all concerned. I would not in any manner wish to impeach their motives, while I do question the results at which they arrive.

Albany, Jan, 1, 1853. H. L. EMERY.

New-York State Ag. Society.

The members of this society should recollect that at the last annual meeting, the time for holding the future annual meetings was changed to the *second Wednesday of February*, at which time the next meeting will be held at the Capitol, in this city.

The Executive Committee held their regular meeting for December, on the 2d, at the society s rooms, in the Old State Hall.

There were present—E. P. Prentice, John Delafield and George Vail, Ex-Presidents; Lewis G. Morris, A. Van Bergen and Charles Lee, Vice-Presidents; Wm. Kelly, John A. Corey, John Butterfield, Executive Committee; Luther Tucker, Treasurer; E. Corning, Jr., and B. P. Johnson, Secretaries.

A letter having been received by the secretary, from the president, HENRY WAGER, informing the Board that, from severe illness, he was unable to be present at the meeting of the Board, very much to his regret, E. P. PRENTICE, Esq., Ex-President, was appointed President pro tem.

Mr. Johnson presented a report from Mr. Wager and himself, delegates to the Fair and Exhibition of the Agricultural Societies of the Eastern Shore of Maryland and Talbot county, which gave a very interesting statement in relation to the improvements now in progress in the husbandry of that part of the country. It was ordered published in the Journal of the Society.

A letter to the president, from J. Delafield, Esq., was read, on the importance of introducing into the State, the cultivated grasses of Great Britain, for the purpose of improving our meadow and pasture lands. The importance of the subject was fully appreciated by the Board.

On motion of Mr. Johnson, Messrs. Delafield, Kelly and Johnson were appointed a committee, to report at the next meeting of the Board, on the subject, as to the best measures to be adopted to accomplish the object.

Mr. Delafield presented to the Board, for their examination, maps of the county of Seneca, and several other counties of the State, prepared with great care, and stated that it was designed to complete the series of maps for the entire State. The Board, aware of the great deficiency existing, at the present time, in the maps of the different counties of the State, which, so far as the surveys of counties made under their direction, has been most manifest,

Resolved, That they deem it a matter of great importance to the agricultural interest of the State, that a set of correct maps should be obtained, and that they trust that Mr. Delafield will be enabled to secure their completion.

Col. L. G. Morris presented to the society, on behalf of H. Strafford, Esq., London, vol. 10 of the Short Horn Herd Book; and on behalf of John Tanner Davy, Esq., Davy's Devon Herd Book.

The thanks of the society were tendered to these gentlemen for their valuable donations to the library of the society.

On motion of Col. Morris, H. Strafford, Esq., and John Tanner Davy, Esq., were elected corresponding members of the society.

On motion of Mr. Johnson,

Revolved, That we deem it of great importance to the agriculturists of our State and nation, that the lectures delivered by the late Prof. John Pitkin Norton, before the Albany University, in the winter of 1852, be published.

Resolved, That Messrs. Prentice and Johnson, be a committee to correspond with the relatives of Prof. Norton, in relation to their publication, and requesting them for the Transactions of the Society, provided they are not to be published in any other form, (the copy right to be secured to Mr. Norton's representatives.)

Weekly meetings during the session of the Legislature were ordered to be held at the Agricultural Rooms, and Messrs. Prentice, Tucker and Johnson, were appointed a committee to make the necessary arrangements.

Mr. Vail and Mr. Johnson were appointed a commit-

tee in relation to an application for the enlargement of the Old State Hall.

The judges for the winter meeting were selected, and the secretary directed to inform the gentlemen, and ascertain previous to the next meeting of the Board, whether they would attend.

Vermont State Ag. Society.

At the annual meeting of this society, held at Montpelier on the 19th Oct., the following officers were elected for the present year:

Frederick Holbrook, Brattleborough, President.

Edwin Hammond, Middlebury; Joseph W. Colburn, Springfield; H. B. Stacy, Burlington; and Joseph W. Fairbanks, St. Johnsbury, Vice-Presidents.

Justin A. Beckwith, Middlebury, Cor. Secretary.

Geo. W. Strong, Rutland, Rec. Secretary.

John Spalding, Montpelier, Treasurer.

John H. Vail, Bennington; Henry Keys, Newbury; Geo. T. Hodges, Rutland; Portus Baxter, Derby; and B. B. Newton, St. Albans, Additional Directors.

New Publications.

WOMAN'S RECORD, OR SKETCHES OF ALL DISTINTINGUISHED WOMEN, *from the beginning till A. D. 1850, with selections from female writers of every age*, by SARAH JOSEPHA HALE. Harper & Brothers, New-York.—This volume, consisting of 900 pages, and illustrated by 230 portraits, engraved by LOSSING & BARRITT, containing the finest specimens of female composition which have ever been produced, and elegantly bound, will be the most popular work of the season. The authoress, who is not without her claims to literary reputation, has shown decided good taste in her selections, and drawn her characters impartially and well. The book will form an excellent guide for those who are desirous to know something of the women who have made a mark on their age, and prompt to more extensive reading. The effect of thorough female education is clearly visible in the increase of writers in that sex, and it is not to be denied that some of the choicest literature of the day, is from the pens of women. The authoress, in some closing remarks, condemns the spirit of Womans' Rights' Conventions in very just and appropriate language.

THE PRIVATE LIFE OF DANIEL WEBSTER, by CHAS. LANMAN. Harper & Brothers.—This neat volume, appearing as it does, before the grief for this distinguished man has merged itself in some new absorbing topic, will have a great run. It would appear that much of his private life was as touchingly beautiful, as full of kind thoughts and generous actions, as his public life was eminent and useful. This book contains a portrait and profile sketch of Mr. WEBSTER, together with wood engravings of his birth-place and residence at Marshfield. It is written in a pleasing, unpretending style, aiming simply at truthfulness.

GRAHAM'S MAGAZINE. GEO. R. GRAHAM, Philadelphia.—The January No. has been received. In the beauty of its illustrations, the style of its execution, and in its contents, it is unsurpassed by its contemporary fashionionable magazines. Indeed, we question whether it does not rank above them altogether, and should not in justice be classed with the best literary periodicals.

LOSSING'S PICTORIAL FIELD BOOK OF THE REVOTION—is now completed. It is finely illustrated, and full of choice and interesting matter. Those who have received the numbers as issued, do not need to be assured of their value, but those who have not, will do well to buy the book.

BLACKWOOD'S EDINBURGH MAGAZINE. Published by LEONARD SCOTT & Co., New-York.—This is one of the best English literary magazines, and its scope embraces a wide range of subjects. Its original disquisitions are of a high order, and its articles on literature, biography, narratives, historical and fictitious, are always written in the best style. It is the organ of some of the most distinguished English authors, and enjoys an enviable reputation, and a large circulation both in Great Britain and in this country. Its price is now only $3 a year, and the postage only 24 cents a year. Leonard Scott & Co. also republish the Edinburgh Review, the London Quarterly Review, the Westminster Review, and the North British Review, at $3 each, or the four, with Blackwood, at $10.

THE HOME JOURNAL, published weekly at New-York. GEO. P. MORRIS and N. PARKER WILLIS, Editors, at two dollars a year, in advance.—This paper is among the best of our family literary journals. The gentlemen who have the charge of it are connoisseurs in matters of taste, and every number shows that the nicest discrimination has been used in the selection, revision and composing of the subject matter. Special efforts are to be made to improve the paper the coming year, and we doubt not it will receive the support it merits.

LITTLE SILVERSTRING, *or Tales and Poems for the Young*, by WM. OLAND BOURNE. Published by CHAS. SCRIBNER, New York.—This finely illustrated volume, is an appropriate present for children at the Holidays. It is written in a simple, tasteful style; abounds in instruction and entertainment, and has a vein of moral sentiment running through the whole. The book was evidently written for the purpose of teaching truth and principle, and the author's felicitous manner of expression enables him to do this effectually, while at the same time it will win him many friends in the young hearts that dwell upon his words.

OSWEGO CORN STARCH FACTORY.—Our readers have often heard of the Oswego Corn Starch, but they may not know the actual extent of the manufacture. The building is five stories, supported by a cast-iron frame, which weighs three hundred thousand pounds. The building covers an acre and a half. About 100 men are employed, and the daily product about 10,000 lbs. of starch. The machinery in the factory weighs about half a million pounds, or two hundred and fifty tons. About 200,000 bushels of corn are annually consumed, 800 tons of coal, and 800,000 feet of lumber for boxes.

Dwarf or Pompone Chrysanthemums.

Few novelties have added so much to the stores of the florist for early winter use, as the New Dwarf Chrysanthemums. Being perfectly hardy, they are adapted to the wants of cottage gardens as well as green-houses, as they are equally fitted for the open ground or for pot culture. We have therefore given a wood cut which gives a good idea of their general appearance. The flowers themselves, are many of them no larger than our engraving, whilst their colors are as brilliant as those of the larger varieties. The plants, (if stopped as they ought to be in summer, while growing,) do not grow more than a foot or 15 inches high, and if well managed, will, in November and December, be a mass of bloom. The mode of culture is as follows: In April or May put several cuttings or shoots from an old plant, into a pot, round the edge, or into the open ground in any light soil. Shade them for a fortnight from the mid-day sun; they will root without glass over them, but if there is a frame or hand glass to put over so much the better. In six weeks stop them; that is, nip off the top with the finger and thumb; this should be above the third leaf from the bottom. New shoots will come out from the eye of every leaf in a few days. As soon as these shoots are about half an inch long, pot singly such as are wished to be bloomed in pots, and plant the others in the garden. The best compost to grow them in is half sandy loam and half old hot bed manure. Take care during the summer to give them water over head and at root, so that they never flag for want of it. Those in pots should, in about four or five weeks from the time they are potted, be shifted into a larger pot. The proper time for doing this is as soon as the pots are filled with roots, which can be easily ascertained by turning one out of the pot, by tapping the edge of the pots on the

edge of the potting bench. The pots should be plunged into the ground, or in coal ashes, putting a piece of broken pot for each to stand on, to prevent the worms entering. In October the pots may be brought into the stove or green-house, to bloom. Liquid manure water given at the root twice a week, will add to the beauty of the foliage, and to the size and color of the bloom; but they will flower well in the above compost without it. The best varieties are La Fiancee, white; Daphnis, purple; Bozard, yellow; Circe, rosy pink, and Bouton de Versailles, mulberry.

What shall we do for Fodder this Winter?

The present scarcity of hay throughout a large portion of the country, has caused the anxious inquiry to be made a thousand times, "How shall we bring our animals safely through the winter?" Many have answered it by selling off at low prices a large portion of their stock; but we believe that taking the country at large, the entire deficiency might be made up, *by saving what is now wasted* —and that too, wasted in a way of which one-half our ordinary farmers are entirely unconscious. "Is it the treading of hay by the cattle into the mud?" eagerly asks one—"Is it by neglecting the use of the straw-cutter?" inquires another—"Is it by irregular and improvident feeding—by allowing animals to injure each other—by permitting our hay to be spoiled by exposure?" are the various questions of others. It is none of these sources of loss, although all are to be carefully avoided, that we refer to. What we mean is the wasteful practice of using hay and meal *for the simple purpose of fuel*—for maintaining the animal warmth of sheep and cattle—but which ought to be used solely for keeping up their flesh. "What! burn up our hay to heat our barns and sheds? Impossible!"

Permit us briefly to explain this matter, for the benefit of that portion of our readers who may not have given it their attention.

Let us inquire why it is that the human body, and the bodies of warm blooded animals generally, (except at the surface merely,) are always at the same temperature, whether in summer or in winter, in cold climates or in hot—why, in the intense cold within the arctic circle, where the mercury of the thermometer is frozen solid, the heat of the body is as great as under the burning sun of the torrid zone? In those cold regions the heat is constantly escaping from the body at a prodigious rate, in the same way that the heat of a stove is constantly passing into the air which surrounds it, and is carried off by the currents. Where does it all come from to supply this constant waste?

By breathing, a large quantity of oxygen from the air is constantly received into the lungs. The circulation of the blood brings this oxygen into contact with the carbon and hydrogen of the blood, both of which are derived from the food. The oxygen combines with these two elements, and in the act of combining heat is given out, in precisely the same way, only more slowly, that it is given out by the burning of wood. Combustion in pure oxygen gas is very intense, and its heat greater than that of the hotest furnaces; combustion in common air is slower, and the heat correspondingly less intense. But in the animal body many hours are required to consume the same amount of oxygen as in quick combustion. But the *real amount* of heat is the same; its intensity is diminished as the time is lengthened. This is further proved by the fact that animals which breathe rapidly, have the highest animal heat. A child has a more rapid respiration than a man, and we accordingly find its temperature two or three degrees higher. Birds breathe more rapidly than quadrupeds, and have four or five degrees more of heat. Fishes and reptiles, known as cold-blooded animals, breathe very slowly. Active exercise increases the amount of bodily heat, by throwing the blood more rapidly into the lungs, and which thus combines faster with the oxygen, or in other words produces a more rapid combustion.

Hence more food is required for animals in winter, to keep up the more rapid waste of heat. And hence too, domestic animals, exposed to cold winds and snow storms, require more food than those sheltered in stables. A starving animal of any kind is soonest frozen to death. Beasts of prey in the arctic regions, far exceed in voracity those of the torrid zone. The inhabitants of the extreme north consume almost incredible quantities of food. Every farmer knows that it requires more grain to fatten beef and pork in the depth of winter, than during the milder weather of autumn.

Now, when domestic animals are exposed to the severe cold of winds and snow storms, there must be three resulting alternatives. Either a large amount of food must be given them to keep up the heat, besides what is needed for aliment; or the flesh must be drawn upon and reduced for the same purpose, developing the skeleton; or else the animal must freeze to death. One of these three alternatives is inevitable. The last, no one desires; the first is a costly process; the second is not less to be dreaded. Now, our advice to all is, to avoid this triple-horned dilemma, by securing the warmth of comfortable shelter.

To prevent, therefore, the consumption of high-priced fodder for the purposes of fuel, a most

wasteful source of heat, we must come at once to the practical details of warm stables, dry sheds, and a free use of good litter and thick horse blankets. The winds which sweep through the cracks often seen in barns, carry off every winter many hard dollar's worth of food; the comfortless wet floors, and yards of snow and mud, absorb a still larger portion. The practice of even blanketing cows, in connection with a thorough attention to cleanliness, has been adopted by some to great advantage. We have known an intelligent farmer, who, by providing warm, close, and comfortable houses for his sheep in winter, actually lost less than in summer; and we have heard of another of extensive experience in sheep raising, who is about to erect a house in such a manner as to be moderately warmed in the severest weather by stove heat, as being more economical than maintaining the heat by feeding.

This is a subject that ought to receive a more thorough attention from farmers generally; for these facts do not rest on the basis of uncertain theory, but are established as thoroughly as any truths in farming. Their full appreciation generally in a country where there are several months of freezing weather, would, we doubt not, lead to a corresponding practice in the erection of shelters, that would save the country at large many hundred thousand dollars in every year.

Agricultural Charlatanry.

Truth, as opposed to error, is the chief good, and in its knowledge lies all progress in religion, politics, social intercourse, science and art. Its antagonist is the great enemy of improvement, and thus these two principles are arrayed against each other; the one the almoner of prosperity, the other the forerunner of ruin.

No one can have failed to detect the presence of these opposing principles in the science and art of agriculture, as taught at the present day. Error as the result of ignorance, opposes the general improvement of agricultural practice, entrenching itself in a blind conservatism. That error is often honestly entertained, in no degree lessens its pernicious influence; for in the absence of truth, as a proper means of guidance, false principles are adopted and adhered to with the zeal due to truth. The most learned are more or less subject to ignorance, for truth is yet in the progress of development, but there is a common stock of knowledge, sufficient for ordinary guidance, and the neglect of this is culpable. This kind of error grows out of mental inactivity, and is entirely incompatible with the thrift of the farmer.

Error, as the result of cupidity, a desire for fame, or other selfish motives, coupled with ignorance, constitutes downright charlatanry. It assumes a specious, tinselled form, to allure the simple and beguile the uninstructed. It is plain that a different culpability attaches to the honestly wrong, and the wilfully false. Yet the effects of charlatanry are determined by the degree of divergence from truth, without respect to motives, and he who proclaims the result of partial observation, ranks with the deceitful suppressor of known truth. Charlatanism is especially prevalent during the early existence of a science, or before its principles are well established. "Astronomy had its astrology, chemistry had its alchemy, geology had its hundred baseless cosmogonies," and agriculture has had its thousand fallacies, many of which are still flourishing. Charlatanry is the misty and spectral darkness of error, and disappears with the dawning of reason and intelligence, and the establishing of sound principles. Agriculture has been especially subject to the impositions of the charlatan, since the majority of farm laborers have been too ignorant to distinguish the true from the false.

Among the prominent *humbugs* of agriculture, are the transmutation of wheat to chess, electro-culture, sowing and reaping by the moon, shade the secret of vegetable growth, barberry blight, atmospheric churns, &c. Some of these lay claim to hoar antiquity; others are the offspring of the last decade. Each have commanded respect in their several localities, and though they have failed to endure the strict ordeal of investigation, they have served a good purpose, in teaching that deviations from the path of truth are to be carefully avoided. Perhaps not one of these erroneous principles had its origin in wrong motives.

There are, however, certain *humbugs* which savor of trickishness. They are the counterfeits of genuine coin, and consist chiefly in the professed application of well established principles. Books on agricultural subjects are manufactured, not because of their worth, but because, with the present appetite for information, they sell profitably. Originality is out of the question, and *compilation* is undertaken by persons totally unfit for the task, which fact may often be ascertained by the variety and scope of their labors. When one man stands as the author of books on half a dozen sciences, and then writes one on agriculture, or when a dozen agricultural topics are made the subject of as many volumes by one man, it is evident there is great ability in the writer or great worthlessness in the books. But voluminousness is not the only mark of want of ability in a writer. I have seen a book of scarcely 300 12mo. pages, professing to serve for the farmers' enlightenment in all the sciences that bear upon his occupa-

tion, Chemistry, Mineralogy, Geology, Meteorology, and Mechanics, were each distinctly treated of!

By the way, why cannot some enterprising publisher issue an American reprint of Prof. Johnston's Lectures, from his last amended edition? We have editions of this book, as issued eight years ago, but they are behind the age.

There is great opportunity for quackery in the manufacture of manures. To what extent it is practiced it is impossible to say, but it is certain that as the business increases, money will be made fraudulently by it. This quackery, bad as it is, bears no comparison in its mischievous results to those effected by fraudulent *chemical analysis*. As the details of the analytic process are accessible only to the special student of chemistry, it is a convenient cover for deceit. The analysis of a soil is valuable, if made thoroughly and conscientiously; but five dollars worth of analysis is usually of no advantage, save to the recipient of that sum. I may in the future, discuss this point at length, but for the present allow me to state two cases of chemical profundity that have come to my knowledge. A gentleman, one of Liebig's pupils, sent to a somewhat celebrated New-York chemist, two samples of a liquid, requesting to know their respective per centage of a given ingredient. In due time the analysis was furnished. No. 1, contained some 80 per cent.; No. 2, only 15 per cent.; according to the learned chemist. Both liquids were *pure oil of turpentine!* In the other case, a mixture was prepared by an experienced chemist, containing 8 or 9 per cent. of a certain ingredient, and forwarded to a chemist, occupying an official position of some importance, with a fee, and requesting him to determine the relative amount of the ingredient. An answer was returned, that the quantity was less than ½ per cent.

All base counterfeits prove the existence of a valuable reality. There is a genuine literature, a genuine chemistry for the farmers. "Let us prove all things, and hold fast that which is good." S. W. JOHNSON. *New-Haven, Ct.*

Inquiries for Answer.

BREAKING STEERS.—I wish to obtain through your pages, some remarks on the management and breaking of steers, and shall be greatly obliged to any of your readers who can enlighten me on the subject. L. M.

OSIER WILLOW.—Can you or any of your correspondents, give me any information in relation to the growth and cultivation of Osier Willows? What soil is most suitable—when they should be cut, and how tall they will grow. We have an Irishman here, who says that in Ireland they have a kind which grows 12 or fourteen feet high. Is it the Osier, or some other kind? I have a swamp on the bank of the river, which is a mucky soil, and is overflowed at high tides. Would they do well in such a situation? MYNDERSE WYNKOOP. *Catt•kill, Nov.* 26, 1852.

Curing Hams.

A friend, who has cured hams, from a recipe given in the Cultivator in 1844, for two or three years past, assures us that he has never seen better hams, and suggests the re-publication of the recipe. It is as follows:

HAMS.—The following mode of prepaparing hams, we have practiced for several years, and can with confidence recommend it to others:

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds of brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling until the salt, &c., is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle, prepared as above, is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather—more time being required in cold, than in warm weather. Beef or mutton hams, intended for smoking or drying, may be cured according to this mode, and will be found excellent.

Much of the goodness of hams depends on smoking. They should be hung at such a distance from the fire, as not to be heated. They should also be hung up with the shank end downward, as this will prevent the escape of their juices by dripping. Small hams, wanted for immediate use, will answer with two weeks' smoking, but larger ones, and those wanted for keeping, should be smoked four weeks or more.

Different articles are used for smooking. Perhaps sawdust from hard wood, where it can be conveniently had, is on the whole to be preferred. Corncobs are first rate, and are said by some to make the "sweetest" smoke of anything. Chips of maple and hickory, or the small branches of those kinds of wood, do well.

PUMPKINS AND SQUASHES IN CORN-FIELDS.—At an ag. meeting in N. Hampshire, a cultivator stated that he had found pumpkins, squashes and turneps, in corn-fields, to lessen the amount of corn. This is to be expected, as they must, as a matter of course, operate in the same way as weeds. He had also found, by using the corn-planting machine for every alternate row, a difference in favor of the corn-planter of about seven bushels per acre. So much for regularity and perfection of work.

CORN FOR SOILING.—This was recommended by some of the speakers, to be sown in small portions for several successive weeks, so as to admit of being cut and fed out in the same way. It had been found best to cut it the day before feeding, and to allow it to wilt partially in the sun, for if fed perfectly fresh it had a tendency to produce scouring, and became unpalatable.

Notes for the Month.

☞ In presenting to the public the first number of our new and CHEAP series of the CULTIVATOR, we are happy to be able to announce that our friend J. J. THOMAS, of Macedon, Wayne co., who has been for years a regular contributor to our pages, will hereafter devote a much larger portion of his time to our Journals, as associate editor. In addition to his services, we have secured other aid for the various departments of our new weekly journal; and as THE CULTIVATOR is to be made up from its pages, we doubt but we shall be able to convince our readers, notwithstanding the great reduction in price, that there will be no deterioration in the character and reputation of The Cultivator. Indeed, we shall be surprised if they do not, at the end of the year, come to the conclusion that the present has proved superior to any former volume.

☞ The postage on THE CULTIVATOR is only *six cents* a year to any part of the United States, to be paid in advance, at the office where it is received.

THE STATE FAIR TOO EARLY.—We are frequently in the receipt of letters from different parts of the state, complaining that the Fair is held quite too early in the season. Farmers in the wheat growing districts, are in the midst of their autumn work, the weather is usually very oppressively warm, and the dust intolerable. A farmer in Steuben county, in a recent communication, says, "Last year there were several hundreds from our county in attendance, and at least thirty from our little town; this year not over four or five persons went from the county. I presume I have been asked a thousand times why the Fair was held so early." The Executive committee of the Society should take this matter into consideration. We doubt not that the postponement of the Fair to two or three weeks later, would accommodate better a large portion of our working farmers.

AGE OF ANIMALS.—A correspondent in Chenango county, under the signature of "Augustus," charges that a man entered a three-year old animal at the last State Fair, in the class of two year olds, and received a premium for it in that class, when he knew that it was over three years old. Such deceptions are sometimes undoubtedly practiced, in spite of all the vigilance of the Society and its committees. If Augustus will communicate the name of the party, with the proof of the fact, to the Secretary of the Society, the person will not be permitted again to enter the list of competitors for the Society's premium.

IMPORTATION OF IMPROVED STOCK.—LEWIS G. MORRIS, Esq., of Fordham, Westchester county, whose annual sales of improved stock, have attracted so much attention for two or three years past, has recently returned from Europe, with several very valuable additions to his herd, purchased by himself, after a careful examination of the best yards in England. They consist of a fine young Durham bull and two heifers, two Devon cows and a bull; the latter and one of the cows from the celebrated stock of Mr. Quartley; the other a prize cow, and both cows in calf by Mr. Quartley's prize bull—some South Down sheep from Jonas Webb, and some Suffolk, Essex, and Berkshire pigs. These animals will enable Mr. MORRIS to give increased value to his herds, and cannot fail to excite a higher interest in his future sales.

Mr. Morris, also purchased a pair of superior Durhams, for NOEL J. BECAR, Esq., of Brooklyn.

Mr. E. CORNING, Jr., of this city, has recently imported three fine Herefords, a bull and two cows, selected especially for him in England. The sire of the heifers was Lord Berwick's celebrated bull, which received the first prize in his class, at the Royal Society's show in 1851.

A LARGE YIELD OF POTATOES.—Mr. J. C. Tiffany, of Coxsackie, Greene county, raised on one-third of an acre, two hundred bushels of potatoes, of the "Dover" variety, from seven bushels of seed. The land was manured with barn-yard manure simply, and the crop while growing received no extra attention, save keeping the ground free from weeds.

LOPPED HORNS.—C. H. STONE, of Warren, Ct., says that lopped horns may be raised by "taking sharp glass, and scraping the horn on the underside of the top, and for two or three inches from it. Scrape it thin, but not so as to cut through it, and then oil with sweet oil. Repeat the operation in three or four weeks, until the horn is raised as high as desired. It will not fail, nor injure the horn."

POTATO ROT.—An article in the Western Horticultural Review, from a correspondent, replies to a few remarks which appeared some months since in this paper, in so uncalled for and discourteous manner, that we are surprised that our friend, the gentlemanly editor of that excellent magazine, should have admitted it without comment. The remarks which we published were a respectful reply to some opinions advanced by the Massachusetts Plowman,—unless a polite request for him to furnish certain new insects which he supposed had been "created," or had made their

"appearance," be regarded as "treating with contempt" the opinions of others. If this was wrong in us, what must we think of the far more uncivil remarks of the writer in the Review? He thinks, because insects have *sometimes* been discovered on diseased potatoes, that they must *always* necessarily exist there—a kind of reasoning which has led to a vast amount of error. If a certain species of Aphis is found in a hundred instances on a diseased plant, and in ten other instances cannot be detected by the most careful daily examinations, this would demonstrate that the disease was caused by something else. And this is the very ground which we have always taken.

The *Farmer's Magazine*, London, copies the entire account of the Trial of Implements at Geneva, from the Cultivator of Sept. last.

HILLING CORN.—At a late meeting of the New Hampshire Legislative Agricultural Society, all the speakers objected to hilling corn. One farmer, who had experimented by hilling and leaving the earth level, found no apparent difference in the product, but found the hilled portions more likely to be broken down by storms. The other stood more firmly; or if bent, sooner recovered itself. Was not this owing to the better maturing and hardening of the roots?

Unfading Beauty.

Dull days have come; the low winds moan,
The sky looks cold and grey;
The leaves, torn from the forest's bough,
In whirling eddies play.

Long since the flowers, the lovely flowers,
That made the landscape bright
As smiles in childhood's happy face,
Have vanished from the sight.

No minstrelsy now fills the groves,
But from the leafless spray,
The raven gives ill-boding notes,
Or cheerless screams the jay.

The garner'd grain, the gather'd fruit,
Have paid for fruitful toil,
And trees, like lifeless monuments,
Stand on the naked soil.

Cold rains descend and copious fill
The saturated land,
While all around the plashy pools
And yellow puddles stand.

Beasts seek their dens, the birds have gone
In softer climes to roam;
The squirrel finds his hollowed tree,
And man, his costlier home.

Still there are charms that cannot fade,
But mock the winter's rage;
The varied seasons safely pass,
And live from age to age.

Then while the frailer things decay,
A solace we shall find,
If we have made these charms our own—
The beauties of the mind. C. F. L. F.

Milwaukie, Wiss.

Mr. EMERY'S advertisement of Reaping Machine, which was promised this month, is necessarily crowded out by the pressure of other matter, till next month.

The Ever Green Sweet Corn.

A FEW bushels of this new and valuable variety of corn, from seed raised by Professor Mapes, for sale. Per bushel, $10; per ½ peck, $2; per quart, $1. Sent by Express to any part of the United States, on receipt of the money by mail. Seedsmen supplied. This is beyond all doubt the most prolific variety of sweet corn ever grown. No farmer should be without it. Address ALFRED E. BEACH,
Jan 1—1t* White Plains, Westchester Co., N. Y.

A Chance to Make Money.

THE subscriber is desirous of having an agent in each county and town of the Union. A capital of from $5 to $10 only will be required, and any thing like an efficient, energetic man can make from three to five dollars per day,—indeed some of the Agents now employed are realizing twice that sum. Every information will be given by addressing, (postage paid,) WM. A. KINSLER,
Jan. 1—1t* Box 601 Philadelphia Post Office.

Improved Superphosphate of Lime,
AND
C. Deburgh's No. 1 Superphosphate of Lime.

IN the Dec. No. of the Working Farmer the undersigned is charged with selling Superphosphate of Lime made by a different manufacturer than Prof. J. J. Mapes, and recommended the same to be of a better quality than his Improved Superphosphate of Lime. We in answer do say, that we sold upwards of one hundred tons of C. Deburgh's No. 1 Superphosphate of Lime. We have, and do now recommend it a better article than that made by Prof. J. J. Mapes, as we had both analysed by one of the best chemists in this country, and found that made by C. Deburgh a superior article. It is made of Bone and Coal dissolved in sulphuric acid, after which a large quantity of Peruvian Guano is added, likewise the residue of ammoniacal chambers, which of itself is an extraordinary fertilizer. We do recommend to every purchaser, to request an analysis from the vender of the so-called improved—also C. Deburgh's No. 1 Superposphate of Lime, and purchase subject to such analysis.
LONGETT & GRIFFING,
Jan. 1—m2w1t. 25 Cliff Street, New-York.

The Lodi Manufacturing Company

OFFER their Poudrette this season at their usual rates, viz: One barrel, $2.00—2 barrels, $3.50—3 barrels, $5.00—5 barrels, $8.00—6 barrels, $9.50, and any amount over 6 barrels $1 50 per barrel. Delivered free of cartage or other expense, on board of vessel or railroad, in the city of New-York. ☞ A small trial requested.

This article is so well known, and so universally approved of as a manure for corn and garden vegetables, that an extended advertisement is scarcely necessary. The Company will send free of cost, to any one wishing further information, a pamphlet containing instructions for use, &c.—also certificates from Hon. Daniel Webster, A. J. Downing, and others, together with other interesting matter. Orders sent by mail, enclosing money, will be promptly acknowledged. All communications must be post-paid, and addressed to the "Lodi Manufacturing Company, New-York," office 74 Cortland Street. Jan. 1—m5.w5t

A Farmer and his Wife

WANTED, to take charge of a Dairy Farm in the town of Rye. Apply to JOHN C. JAY, Rye, Westchester Co., N. Y. Nov. 1, 1852—3t.*

New and Important Insurance.

Northern N. Y. Live Stock Ins. Co., Plattsburgh N. Y.

INCORPORATED by the Legislature of the State of New-York, July, 1851. Horses, Cattle, and all kinds of Live-Stock insured against Death, by the combined risks of Fire, Water, Accidents, Diseases, &c CAPITAL, $50,000.
GEORGE MOORE, Plattsburgh, Sec'y.
I. C. MIX, Fort Ann, Gen. Agent.
October 13, 1851.

This company are now organized and ready to receive applications for insurance. It is confidently believed that the owners of valuable animals will avail themselves of the advantages offered by this mode of protection. If fire, life and marine insurances are proper and expedient, so is live stock insurance: the reasons for insurance are equally applicable to all.

For terms please apply to Company's Agents.
Plattsburgh, July 1—tf.

CHEAPEST FAMILY NEWSPAPER IN THE WORLD.

THE DOLLAR NEWSPAPER, PHILADELPHIA,

IS afforded to single subscribers at One Dollar per year. This paper is now ten years old, and has a larger paying subscription list, than any other family paper in the United States. It is printed on a large imperial sheet, with fair type, and contains as much reading as the largest of the two dollar weeklies. The great aim of its publishers is to make it an entertaining, as well as an instructive family companion. To this end a large amount of literary talent has been enlisted in its behalf, and the

BEST STORIES AND POETRY

that reach the public through the newspaper press, are published in the "Newspaper." In the matter of NEWS it has superior facilities, being printed on a pair of Hoe's celebrated eight cylinder machines, capable, the two, of printing forty thousand impressions per hour, its columns are kept open to within a few hours of its date and by a liberal expenditure for news by magnetic telegraph, is every week enabled to furnish its subscribers with intelligence from *four to eight days* nearer its date, than do the two dollar weeklies, which are mostly printed on the common slow press. A large portion of each humber is devoted to original articles on

AGRICULTURAL SUBJECTS,

from scientific and practical farmers, the consideration being a free subscription to all who will become occasional contributors to the Farmer's Department of our paper. Market Reports, Biographies, Sketches, Reviews, and in fact every thing tending to make a complete family paper, is encompassed within the design of its publishers, without regard to expense.

The Subscription Terms are for One Newspaper Weekly, One Year, One Dollar.

Club of 6 copies, ...	$5	Club of 34 copies, ...	$25
Club of 13 copies, ...	10	Club of 42 copies, ...	30
Club of 20 copies, ...	15	Club of 50 copies, ...	35
Club of 27 copies, ...	20	Club of 75 copies, ...	50

The amount of subscription must be in advance, and in no case for a shorter period than one year. Orders for subscriptions must be addressed post-paid, to

A. H. SIMMONS & CO.,
Publishers of the Dollar Newspaper, S. W. Corner of
Jan. 1—1t. Third and Chestnut sts., Philadelphia.

Agricultural Implements.

STRAW AND STALK CUTTERS—of all patterns.
CORN MILLS—both of Iron and Burr Stone.
CORN AND COB CRUSHERS—of Beals', Nichols' and Sinclair's make.
ROAD SCRAPERS—of several patterns.
FANNING MILLS—of all the best makers.
SAUSAGE STUFFERS AND CUTTERS—of all patterns.
VEGETABLE OR ROOT CUTTERS—of approved kinds.
CORN SHELLERS—for hand and horse power.
VEGETABLE BOILERS—of Mott's and Bent's patterns.
GARDEN AND WHEEL BARROWS—of iron and wood.
HAY AND COTTON PRESSES—Bullock's patent
BRICK MACHINES—of Hall's and other makers.
WAGONS AND CARTS.
PLOWS—of Prouty & Mears, Centre Draft, and Rich's Iron Beam PLOWS—Eagle, Massachusetts make, and Minor & Hortons.

For sale at the State Agricultural Warehouse, No. 25 Cliff Street, New-York. Nov. 1—tf.

Important to Farmers.

IT is generally conceded by all intelligent Farmers, that cutting the food for cattle will save about from 25 to 30 per cent. Berthelf's Oblique Rotary Corn Stalk, Hay and Straw Cutter, is conceded by all that have used them, to be far superior to any other, as it destroys all hard substances in the stalk, leaving it soft and easily eaten. It urns very easy, and is not liable to get out of order, and with care will last an age. It has been awarded four First Premiums and a Silver Medal, by the American Institute, For further particulars, address, (post-paid,) the Patentee, H. W. BERTHOLF, Sugar Loaf, Orange County, N. Y., or LONGETT & GRIFFING, 25 Cliff St., New-York, who are agents.

Patent Rights for sale. Nov. 1—3t.

EMERY & CO.'s

Improved Horse Power. Thrashers and Separators.

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July 1—tf. 25 Cliff street, New-York.

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Albany, April 1, 1852—tf. JOHN GOTT.

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THOS. BROWN, Publisher,
Merchant's' Exchange, Cleveland, Ohio.
Cleveland, Nov. 1, 1852—3t

THE Tranactions of the New-York State Agricultural Society, vols. 1 to 9, for sale at the Office of "THE CULTIVATOR," price $1 per vol.

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Jan 1—m&w2t THOMAS HUN, Registrar.

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